

THE INFLUENCE OF SONIC LOGOS IN TELEVISION ADVERTISEMENTS: A NEUROMARKETING PERSPECTIVE

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DECLARATION

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ABSTRACT

When engaging in brand-building, marketers often appeal to consumers' senses. However, one of the senses which has often been ignored by marketers is the consumer's ability to hear. This state of affairs is puzzling, as sound in its various forms can play a central role in brand-building (Krishnan, Kellaris and Aurand, 2012).

Using sound as a strategic marketing tool is known as sonic or audio branding. Sonic branding is defined as the strategic use of sound to create a distinctive auditory identity for a brand (Krishnan et al., 2012). The general idea is to utilise sound and music more consciously to create a link between the consumer and the brand and to not only use music to support an advertisement (Groves, 2012). Successful sonic branding creates triggers that disrupt existing patterns, attract the consumer's attention and remind the consumer of positive experiences with the brand (Beckerman and Gray, 2014).

In-store music, jingles and sonic logos are examples of audio elements that can be used as sonic branding tools. A sonic logo is a small piece of music or sound that is connected to the brand (Groves, 2012) and is sometimes perceived as the auditory counterpart of the visual logo of the brand (Krishnan et al., 2012).

Despite the fact that sound has the ability to influence different areas of consumer behaviour (Krishna, 2012), there is limited information available on how a brand can utilise sound strategically to create a unique identity for a brand and how a sonic logo ought to be selected. Research on the subject is limited because sound is often processed at an emotional subconscious level and traditional research methods cannot measure the influence of sound on the emotional response of the consumer. Using traditional research methods to investigate the impact of sound in branding is also subject to potential measurement error. One of the key benefits of using neurophysiological research methods is to narrow the "say" versus the "do" gap in consumer behaviour research (Van Praet, 2012:22) and to investigate the influence of stimuli on emotions.

The purpose of this study is to understand how sonic logos are processed by the consumer at an emotional subconscious level. Television advertisements for vehicle and electronic brands were used to assess the subconscious impact of the sonic logos used at the end of six advertisements. The neurophysiological research methods used for data collection were electroencephalography (EEG), electromyography (EMG) and galvanic skin response.

The results revealed a significant difference between how males and females emotionally processed the sonic logos of certain brands (EMG). This differentiation ought to be taken into consideration when selecting an audio element for a brand. The emotional responses of the participants towards the sonic logos did not indicate a long-term effect (EEG). This could suggest that the way in which certain brands are currently using sonic logos is not necessarily effective in creating a long-term emotional connection.

OPSOMMING

Bemarkers fokus gereeld op die sintuie wanneer die identiteit van handelsmerk geskep word. Die vermoë van die verbruiker om te hoor word egter grotendeels geïgnoreer. Die situasie is verbasend, aangesien klank 'n belangrike rol kan speel in die bou van 'n handelsmerk (Krishnan, Kellaris en Aurand, 2012).

Die strategiese gebruik van klank in bemarking staan bekend as “sonic branding”. Dit word gedefinieer as die strategiese gebruik van klank om 'n unieke identiteit vir 'n handelsmerk te skep (Krishnan et al., 2012). Die algemene idee is dat bemarkers meer bewus van musiek en klank behoort te wees, dit strategies gebruik en nie slegs as agtergrond musiek vir 'n advertensie nie. As musiek of klank suksesvol gebruik word, sal dit die aandag van die verbruiker trek en hom/haar herinner aan positiewe ervarings met die handelsmerk (Beckerman en Gray, 2014).

Musiek, “jingles” en die klank-merk van 'n handelsmerk is voorbeelde van klankelemente wat strategies gebruik kan word. 'n Klank-merk is 'n kort stuk musiek of 'n geluid wat met die handelsmerk geassosieer is (Groves, 2012) en word op dieselfde manier as die visuele logo van 'n handelsmerk gebruik.

Ten spyte van die feit dat klank die vermoë het om die verbruiker se gedrag in verskillende areas te beïnvloed (Krishna, 2012), is daar min inligting beskikbaar oor hoe 'n bemarker klank strategies kan gebruik om 'n unieke identiteit vir 'n handelsmerk te skep, sowel as hoe 'n spesifieke geluid van 'n handelsmerk gekies behoort te word. Navorsing in die area is heel moontlik beperk as gevolg van die feit dat meeste klanke op 'n emosionele vlak, onder die bewussyn van die verbruiker, geprosesseer word en tradisionele navorsing metodes kan nie die volle effek op die emosionele reaksie meet nie. Die gebruik van tradisionele navorsing metodes om die effek van klank te bestudeer mag moontlik ook foute teweegbring. 'n Belangrike voordeel van neurofisiologiese navorsing is dat dit die verskil tussen wat verbruikers sê en in werklikheid doen in ag geneem (Van Praet, 2012:22) en die invloed van stimuli op die emosies van die verbruiker bestudeer.

Die doel van hierdie navorsing is om te bestudeer hoe die klank-merk van 'n handelsmerk in die emosionele onderbewussyn van die verbruiker geprosesseer word. Ses televisie advertensies met klank-merke in die finale toneel is gebruik om die invloed van die klank-merk op die onderbewussyn van die verbruiker te bestudeer. Die advertensies van voertuig en elektroniese handelsmerke is vir die studie gebruik. Die volgende neurofisiologiese navorsing metodes is gebruik: EEG, EMG, sowel as vel geleiding.

Die resultate van die studie dui aan dat daar 'n beduidende verskil is tussen hoe mans en vrouens die klank-merk van 'n handelsmerk prosesseer (EMG). Die verskil behoort oorweeg te word wanneer die klankelemente van 'n handelsmerk gekies word. Die deelnemers se emosionele reaksie teenoor die klank-merk het egter nie 'n lang-termyn effek gehad nie (EEG). Met ander woorde, die manier waarop sekere handelsmerke klank strategies gebruik is nie noodwendig effektief om 'n lang-termyn emosionele verbinding tussen die verbruiker en die handelsmerk te bou nie.

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CHAPTER 1

INTRODUCTION TO THE STUDY

1.1 BACKGROUND

The use of music and sound represents a valuable opportunity for marketers to connect consumers with their brands and create positive emotional associations. Consumers are continuously exposed to audio experiences, even when they are not consciously aware of them (Beckerman and Gray, 2014). The reality, however, is that many organisations do not know how to use sound strategically and fail to incorporate it successfully into their marketing strategies.

Branding is defined as the initial means used to build awareness by identifying the product and distinguishing it from other products and services in the category (Kay, 2006). Branding has become an important priority in the last decade and brands are considered to be one of the most valuable intangible assets that a company can have (Keller and Lehmann, 2006; Farhana, 2012). Sensory branding is a form of branding that has received a significant amount of attention over the last few years. It is described as a multi-sensory brand experience that encourages individual value creation and refers to how the consumer responds when an organisation interacts and supports the purchase and consumption process with the involvement of all five senses in producing customer value, experiences and the brand's image (Hultén, 2011). Despite the importance of sensory branding, the pre-dominant focus of most brand communication has been on the visual sense and non-visual cues such as hearing, smelling, touching and tasting have largely been ignored (Bartholme and Melewar, 2011). . Sonic branding is considered to be a type of sensory branding focused on the use of audio. Sonic branding represents a unique way to distinguish a brand, as music and sound are often connected to strong emotional feelings. Consumers are typically more loyal towards a brand with which they have an emotional connection. When marketers facilitate strong emotional attachments to brands, consumers are more likely to be devoted to the brands and continuously repurchase those brands (Grisaffe and Nguyen, 2011).

Many marketers attempt to use music and sound well, but fail to effectively distinguish the audio identities of their brands. In order for a brand to be differentiated successfully by means of music or sound, it has to be considered strategically (Beckerman and Gray, 2014). A concern related to the strategic use of sound and music is that these elements are often processed at a subconscious level; it is therefore challenging to study its influence on the consumer's decision-making.

The reality is that many organisations believe that consumers make most of their choices consciously. In other words, they believe consumers deliberately consider the individual and relative value of a specific object's attributes and the probability that the assigned value will be realised, and also that this information is then processed in some logical way to arrive at a final decision (Zaltman, 2003:7). However, in reality, decision-making is based on interplay between cognitive and emotional structures and circuits in the brain (Peacock, Purvis and Hazlett, 2011). In order to achieve branding at the deepest and most influential level, it is necessary to consider both the conscious and subconscious dimensions (Van Praet, 2012:89). Neurophysiological research methods have the ability to access subconscious emotional feelings (Va, 2015).

The focus of this study is to assess the influence that a sonic logo will have on the subconscious emotional response of the consumer. Chapter 1 provides an outline of the study. Sonic branding and the use of sonic logos are discussed briefly, as well as the methodology that will be used and an outline of each of the chapters included in the study.

1.2 SONIC BRANDING

Sonic branding is a developing area in the domain of marketing. It is known as the strategic use of sound to create a distinctive auditory identity for a brand (Krishnan et al., 2012) and in essence it enables the brand to communicate its identity to the consumer via the sense of hearing (Groves, 2011).

Although sound and music have been used in different ways in marketing for many years, its strategic value and the notion that music and sound be can used as a means to distinguish a brand and create a strong brand association has only been recognised recently. As a result, there is limited research on sonic branding and the different sonic branding elements.

Sound and music have the ability to immediately alter people's moods or perceptions and generate specific images in their minds (Beckerman and Gray, 2014). They also have the ability to evoke a range of different emotions; from mere arousal and basic emotions such as happiness and sadness to complex emotions such as nostalgia (Juslin, Hamat and Eerola, 2013). The use of music and sound ought to be considered strategically by marketers, as it has the ability to connect with the consumer on an emotional level. The consumer's ability to respond to sound is central to his/her consciousness as it frames every moment and invisibly triggers powerful memories and emotional reactions (Beckerman and Gray, 2014). In many ways, audio is more compelling than visuals, so it is interesting that only a few brands consider the use of audio strategically at this stage (Lafferty, 2015).

Krishnan et al. (2012) define sonic branding as the strategic use of sound to create a distinctive auditory identity for a brand. Generally, the idea of sonic branding is to utilise sound and music more consciously

and strategically in order to create a link between the consumer and the brand and to not only use music to support a television advertisement or a campaign (Groves, 2012). Often the music utilised for a specific advertisement is only considered in the final process of the advertisement's development. However, sound in its various forms can play a central role in branding (Krishnan et al., 2012) and should therefore be strategically managed. Effective sonic branding requires creating and facilitating sonic triggers that disrupt expected patterns, attract the consumer's attention and use the attention to remind the consumer of positive experiences with the brand (Beckerman and Gray, 2014).

In the past, the music and sound choices of many marketers and agencies were random, often dependent on the financial resources available and rarely associated with the identity of the brand (Brodsky, 2011). However, music and sound are highly influential and have the ability to influence consumers' perceptions of the brand. The sonic logo is a type of sonic branding element.

1.3 SONIC LOGOS

The sonic logo – sometimes referred to as a sound logo or an audio logo – is a signature sound, such as a small piece of music or a sound that communicates to the consumer what the brand is (Groves, 2012). Examples of well-known sonic logos include the 5-tone Intel logo and the 4-tone start-up chimes of Windows Vista (Krishnan et al., 2012).

Sonic logos can be defined as acoustic signals of very short duration, which may be naturally sampled sounds (vocal or external), instrumental or sung melodies or synthetic sound effects (Bonde and Hansen, 2013). The sonic logos associated used by Samsung and LG are examples of instrumental melodies. The classic roar of Metro Goldwyn Mayer and the swoosh sound of Skype are examples of sampled and synthetic sounds (Bonde and Hansen, 2013).

At this stage, there is no globally-accepted method for selecting the music or sound for a brand and no globally-accepted method to measure its usefulness for a brand (Jackson, Jankovich and Sheinkop, 2013:7). Groves (2012) suggests that the auditory elements of a brand's identity should be managed with the same attention and meticulousness that is given to the brand's visual elements. Therefore, audio elements, such as sonic logos, should be used in the same way that the visual elements of a brand are used consistently and continuously across various touch points.

The ability of a sonic logo to trigger a significant emotional feeling ought to be considered, as music has the ability to be strongly linked to emotions and memories (Oakes, Patterson and Oakes, 2013). Consumers' affective reactions towards the sonic logo of the brand could be transferred to the product and influence their overall feelings towards the brand.

1.4 RESEARCH QUESTION

There are some organisations that have integrated sonic branding in their marketing strategies. They believe audio associations are useful in creating a distinctive audio identity for a brand (Basile and Quigg, 2011). However, in order for brands to successfully implement sonic branding and use sonic logos strategically, it is necessary to develop better understanding of how sonic logos are processed by the consumer on a subconscious emotional level.

The use of sound and music have not often been considered in the areas of marketing and branding (Bartholmé and Melewar, 2009). Although the importance of music and other auditory stimuli in the retail environment have been recognised (Morrison, Gan, Duberlaar and Oppewal, 2011), there is still a lack of awareness on how audio can be utilised strategically in other areas to create a distinctive brand image. One of the key factors that could be contributing to the lack of awareness is that there is inadequate academic research and information available on the subject. The majority of research in brand image have focused on the visual identity and the sensory dimension of sound has rarely been considered (Bartholmé and Melewar, 2009). Although some brands use sonic logos, there is no empirical evidence at this stage to indicate that this is a worthwhile practice and that there are tangible benefits associated with its use. Sonic logos could present a unique opportunity for brands to distinguish themselves from others and create strong brand associations. In order for brands to successfully use sonic branding and to create a strong and worthwhile brand association, a better understanding of the subject is required.

Although there have been some studies in the past that have investigated the use of certain sound elements, such as music in advertising and the retail environment, there is a significant need for more research on the effect and influence of brands' sonic logos on the subconscious emotional response of the consumer. Lewis, Fretwell and Ryan (2012) argue that it would be beneficial for marketers and advertisers to gain a better understanding of sounds that would be appealing to the consumer, and their study investigated the influence of specific sounds in advertising on the emotional response of the viewer. The results indicated that the emotional response to a sound clip is predicted by the level of interest generated by the sound and how well the sound captures the attention of the participant. However, in the study of Lewis et al. (2012), a survey method was used and consumers were asked to rationally consider and rate their emotional responses to a specific sound on various emotional scales. None of the previously reported studies investigated whether the sound had had an influence on the consumers' subconscious emotional response. In other words, they did not consider whether the sound might influence the consumer at a level that he/she might be unaware of. Furthermore, only sound clips typically used for sound effect purposes in advertisements, such as bird sounds, were investigated and they were not

presented within an advertisement in a way that the consumer would have been exposed to the sound in an advertisement.

There are a limited number of studies that have investigated the influence of sonic logos on consumers. Wu, Fu, Huang and Wang (2010) investigated consumers' perceptions of different brands' audio trademarks to ascertain which characteristics are important when selecting and designing an audio trademark. The findings indicated that an audio trademark should be designed in such a way that it assists the consumer in remembering the brand and elicits positive awareness, association, attitude and perceptions. The findings also suggested that slogan-alone trademarks, specifically those with vague meanings, may lead to negative attitudes and preferences. Although the study made a contribution to our understanding of sonic branding, it used surveys and other traditional research methods to collect the data. The sonic logo and other audio elements of a brand are not necessarily noticed and processed by the consumer on a conscious level. The use of only traditional methods in this type of study will not necessarily reveal how the sonic logo is processed at a subconscious level by the consumer. The influence that a sonic logo can have on a consumer's subconscious emotional condition should also be taken into consideration and neurophysiological research methods can be used to address this limitation.

Thus the research question addressed by this study is to assess what the influence of a sonic logo used in a television advertisement is on the subconscious emotional condition of the consumer. This study will also consider the differences that may exist between the subconscious emotional responses of male and female consumers.

1.5 OBJECTIVES OF THE STUDY

In order to explore the influence of the sonic logo on the subconscious emotional condition of the consumer and thereby address the research question, the following primary and secondary objectives will be addressed.

1.5.1. Primary objective

The primary objective of the study is to investigate what the influence of a sonic logo used in a television advertisement is on the subconscious emotional condition of the consumer. The study will also consider how males and females might differ in how they process the sonic logo of a brand at a subconscious emotional level.

1.5.2. Secondary objectives

To address the primary objective of the study, the following secondary objectives will be pursued:

1. To investigate whether a sonic logo used within a television advertisement evokes a significant subconscious emotional response in the participant compared to the baseline as measured by an EEG, GSR and EMG;
2. To investigate whether a visual logo used within a television advertisement evokes a significant subconscious emotional response in the participant compared to the baseline as measured by an EEG, GSR and EMG;
3. To investigate whether a sonic logo used within a television advertisement evokes a significant subconscious emotional response in the participant compared to a television advertisement with no sonic logo as measured by an EEG, GSR and EMG;
4. To investigate whether a sonic logo used within a television advertisement evokes a significant emotional response in the female participants compared to the baseline as measured by EEG, GSR and EMG;
5. To investigate whether a sonic logo used within a television advertisement evokes a significant emotional response in the male participants compared to the baseline as measured by EEG, GSR and EMG;
6. To investigate whether a sonic logo used within a television advertisement evokes a significant emotional response in the female participants compared to the male participants as measured by EEG, GSR and EMG;
7. To investigate whether a visual logo used within a television advertisement evokes a significant emotional response in the female participants compared to the baseline as measured by EEG, GSR and EMG;
8. To investigate whether a visual logo used within a television advertisement evokes a significant emotional response in the male participants compared to the baseline as measured by EEG, GSR and EMG;
9. To investigate whether a visual logo used within a television advertisement evokes a significant emotional response in the female participants compared to the male participants as measured by EEG, GSR and EMG.

1.6 RESEARCH METHOD

The first part of the study explored sonic branding and other related concepts by means of secondary research.

1.6.1 Literature study

A variety of different secondary sources were used to explore sonic branding and its function in the domain of marketing and branding. In order to ensure a solid theoretical foundation, books and peer-reviewed academic articles from the databases Ebscohost, Elsevier, ProQuest and Scopus were consulted. To include the industry perspective on sonic branding and sonic logos, relevant magazine articles, websites and webinars were also used.

The literature review focused on the different factors that influence the use and value of sonic logos for marketers and how they should be utilised. Branding theories, models and their relevance to sonic branding were discussed. The literature review also specifically considered how sonic logos are currently used by marketers, what their value is and the influence of sonic logos on the subconscious emotional condition of the consumer.

1.6.2 Empirical study

The key purpose of the study was to develop a better understanding of how the sonic logos of brands used in television advertisements are processed by the consumer on a subconscious emotional level.

A laboratory experiment was used for the study. The sonic logos of six brands from two different product categories – electronics and automobiles – were used. Six advertisements were identified, one for each brand. In each of these advertisements, a sonic logo was used, in combination with a visual logo during the last few seconds of the advertisement. A manipulated version of each advertisement was created. In the manipulated version, the sonic logo at the end of the advertisement was muted in such a way that the participant would not notice that an element of the advertisement had been removed.

The study used a between-subject design. Half of the participants viewed the advertisement with the sonic logo and the other half viewed the manipulated version of the advertisement. The order in which the advertisements are presented was randomised.

1.6.2.1 Measurements

The use of neurophysiological research techniques to study emotions in marketing is a complicated and relatively new technique. A number of different neurophysiological research techniques were used.

Previous research has confirmed that the use of EEG, EMG and GSR facilitates the identification of different neurophysiological patterns of functioning of the brain and facial muscles connected with emotions and arousal during contact with two minimally different versions of the same ad (Ohme,

Reykowska, Wiener and Chromanska, 2009). Therefore, the capabilities of these techniques make them appropriate to study the influence of a sonic logo on the subconscious emotional response of the participants.

Electroencephalography

Electroencephalography (EEG) is a non-invasive and a fairly economical technique that measures a participant's brain activity in response to a specific stimulus (Fortunato, Giraldi and De Oliveira, 2014). It is often used by cognitive neuroscientists and neurologists to measure electrical activity in the brain (Ohme, Reykowska, Wiener and Chromanska, 2010).

EEG has an exceptionally high temporal resolution which allows researchers to accurately distinguish changes in brain activity that are linked to quick changing stimuli (Ohme et al., 2010). This attribute allows the measure of activity the second a stimulus is presented and makes it useful in the research and analysis of television advertisements. A disadvantage of EEG is that it has restricted anatomical specificity and that it cannot collect any information from the deeper structure of the brain, but only the surface (Ohme et al., 2010).

Facial Electromyography

Facial electromyography (EMG) was also used in this study. EMG is a technique that studies the physiological properties of certain facial muscles (Ohme et al., 2009). EMG works by attaching sensors to different parts of the face and studying the contractions of certain facial muscles in response to specific stimuli (Zurawicki, 2010). The EMG measures minuscule fluctuations in the electrical activity. Three muscles are often studied with EMG: the *corrugator supercili*, the *zygomaticus major* and the *orbicularis oculi* (Ohme et al., 2009). The EMG activity of the *corrugator* (frown muscle) is typically associated with negative emotional stimuli, negative mood and increased tension (Peacock et al., 2011).

Galvanic Skin Response

Galvanic skin response was used to assess the participants' levels of arousal. If an element in an advertisement stimulates the participant's autonomic nervous system, a physical reaction will follow in the sweat glands found in the palms and fingers (Shimp, 2010:299). This activity allows one to measure the degree and frequency to which an advertisement or a specific element in a stimulus will activate an emotional response in a participant. GSR was used to measure the intensity of a positive or negative reaction towards a specific sonic logo.

1.6.2.2 Stimuli

Six different television advertisements that used sonic logos in combination with visual logos at the end of the advertisements were used for the study. South African television advertisements that had been shown on television during the last year were used to ensure the external validity of the study. All the advertisements selected were the same length of time. The advertisements were taken from two different product categories, namely automobiles and electronics. Some of the brands in these categories have used sonic logos for a significant period of time and the study focused on sonic logos that the consumer has been exposed to in the past.

1.6.2.3 Sample

The target population of the study consisted of individuals from the target markets of the brands that were tested. As the study was conducted in a specific laboratory environment and participants were tested individually, a convenience sample was used.

Participants had to be aged 18 years and older. All of the participants had to be right-handed, as certain consumer neuroscience and neurophysiological techniques, such as the EEG, EMG and GSR devices, are equipped to test only right-handed individuals.

The participants were asked to take part in the study on a voluntary basis and were rewarded with a financial incentive. Ninety individuals were tested; fifty percent of the sample was male and fifty percent was female.

Prior to committing to partake in the study, the participants were given information about the specific requirements, procedures and how long the study would take.

1.6.2.4 Laboratory procedures

The study was conducted in the neuro laboratory at the University of Stellenbosch. The laboratory has the equipment required for this study, specifically the EEG, EMG and GSR devices. The testing sessions took between an hour and a half and two hours for each participant. Participants were required to read and sign a consent form that explained the procedure of the testing in detail, as well as the necessary requirements to participate in the study. During the set-up of the neurophysiological equipment, the procedure was explained to the participants in detail.

Participants were instructed to watch a series of advertisements. Participants were asked not to speak while viewing the advertisements. In order to ensure that their reactions would not be influenced by the purpose of the research; they were not given information on the objectives of the study.

1.6.2.5 Data analysis

The data was analysed by comparing the subconscious emotional responses of the participants to the scene of the television advertisement with the sonic logo to the scene of the television advertisement with no sonic logo.

The EEG data indicated whether the responses of the participants towards the sonic logos were positive (above zero) or negative (below zero). The GSR was used to assess the participants' levels of arousal and indicated a score of zero or above. For the EMG measurement, the *corrugator supercili* activity was subtracted from the *zygomaticus major* activity to generate either positive (above zero) or negative reactions (below zero).

An average score was calculated for each of the neurophysiological techniques used to test the influence of either the sonic logo or no sonic logo in the advertisement. These scores were compared to a baseline of the participants by means of an independent samples t-test.

The average of the participants' scores towards the scene with the sonic logo and the scene with no sonic logo, as well as the difference between male and female participants' scores towards these scenes, was also compared by means of independent samples t-tests.

1.7 CONTRIBUTION OF THE STUDY

There is limited research on sonic branding, specifically the use of sonic logos. This study assessed whether sonic logos, as they are currently being used, have value for brands. It specifically explored whether a sonic logo used at the end of a television advertisement triggers a significant subconscious emotional response in the consumer. Neurophysiological research methods were used to assess the sonic logo's influence on the valence and arousal of the emotional response.

This study assessed the influence of sonic logos that are currently being used by brands from the following product categories: electronics and automobiles. This study makes a contribution to our understanding of sonic logos and provides a foundation for future research.

It also assessed whether a sonic logo has the ability to trigger a significant subconscious emotional response and whether neurophysiological research methods are effective means to study it.

1.8 CHAPTER OUTLINE

A short outline of what is discussed in each chapter is presented below.

Chapter 2 provides a brief overview of marketing. Firstly, it discusses the history and definition of marketing. Thereafter, the importance of marketing, the current issues in marketing, the marketing mix and the different areas of marketing are discussed.

Chapter 3 discusses branding and the theoretical constructs relevant to sonic logos. The first part of the chapter focuses on where the concept of branding comes from, the definition of branding, the value of a brand and other brand concepts. The second part of the chapter focuses on other types of branding specifically related to sonic branding, such as emotional branding and sensory branding.

Chapter 4 focuses on the importance and value of music and sound for marketing. It discusses the concept of sonic branding and the different sonic branding elements. Insights from the areas of ambient and advertising music are discussed to provide a theoretical basis for the study of sonic logos. The concept of the sonic logo is also discussed.

Chapter 5 discusses the different perspectives of consumer decision-making and the role of the consumer's consciousness. The chapter also discusses emotions and how they influence consumer decision-making. In the final section of the chapter, the use of neurophysiological research techniques in marketing research is discussed.

Chapter 6 discusses the research methodology that was used for the study. Secondary research provided a significant understanding of the theoretical foundations that are relevant to the study. From this knowledge, research objectives and hypotheses were developed and addressed by the empirical research of the study. This chapter also discusses in detail the different neurophysiological research techniques that were used, the laboratory procedure and the sample of the study. The stimuli that were developed to test the influence of the sonic logos on the subconscious emotional response of the consumer and the data analysis plan are also discussed.

Chapter 7 discusses the results of the empirical research. The first part of the chapter focuses on the results of the hypotheses that investigated the differences between how participants processed the endings of the advertisements with the sonic logos and the endings of the advertisements without sonic logos. The second part of the chapter focuses on the results of the hypotheses that investigated the differences between how male and female participants processed the endings of the advertisements with sonic logos. The differences between participants' subconscious emotional responses were considered with three different neurophysiological research techniques: EEG, GSR and EMG.

Chapter 8 discusses the findings of the study and their implications. The first part of the chapter discusses the findings on how participants processed the endings of the advertisements with the sonic logos and the endings of the advertisements without sonic logos. The second part discusses the findings on the difference between the subconscious emotional responses of the male and female participants toward sonic logos. The theoretical and managerial contributions of the study are also discussed, as well as the limitations that ought to be considered and the recommendations for future research on the subject of sonic logos.

1.9 SUMMARY

The purpose of this study is to assess the influence that a sonic logo will have on the subconscious emotional response of the consumer.

The first chapter provided an outline of the study. Relevant literature was discussed to show the theoretical constructs upon which the study is based. The methodology was also discussed, as well as an outline of each of the chapters that were included in the study.

In Chapter 2, an overview of marketing will be discussed. Sonic branding and the use of sonic logos form a part of the domain of marketing and it is, therefore, important to understand how it functions within this domain.

CHAPTER 2

AN OVERVIEW OF MARKETING

2.1 INTRODUCTION

The purpose of this study is to investigate the influence that sonic logos have on the subconscious emotional response of consumers and assess whether there are significant differences between how male and female consumers process the sonic logo of a brand. This chapter provides a brief overview of marketing. Firstly, it discusses the history and definition of marketing. Thereafter, the importance of marketing and the current issues in marketing are discussed. Finally, the marketing mix and how it relates to branding sonic branding is discussed.

2.2 HISTORY OF MARKETING

The earliest evidence of marketing activity can be traced to the Ancient Babylonians, Hebrews, Greeks and Romans (Zinkhan and Williams, 2007). In writings from the early fourth century BC, Plato presents a dialogue in which Socrates argues that the marketplace “exchange” is a fundamental foundation of society (Zinkhan and Williams, 2007).

The first known marketing activity in the world was the labelling of a product in 3400 BC, when food storing jars were labelled with ancient scripts in clay (Va, 2015). The first presence of retail marketing was in 2560 BC when ancient people from Minos drew, carved and painted illustrations of their products to display in front of their stores (Va, 2015).

The development of print media in 1609 introduced the concept of advertising in newspapers. Gillette started distributing razors as freebees to sell shaving blades in 1870, and in 1918 designer labelling was introduced when Coco Chanel opened a clothing store (Va, 2015).

Since those early times, marketing has evolved and changed significantly over the years. Essentially, marketing is a form of business orientation that evolved in the 1950s through several alternative approaches to doing business: the *production concept*, the *product concept*, the *selling concept* and the *marketing concept* (Schiffman and Kanuk, 2007:4).

The *production concept* assumed that consumers were mostly interested in product availability at low prices; its marketing objectives were cheap, efficient production and intensive distribution (Schiffman and Kanuk, 2007:5). Similarly, Krishna (2013:25) suggests that the first phase development, which is sometimes referred to as the no-nonsense era, was immediately after the war in the 1950s. At this stage

consumers were mostly focused on the practical value and the cost of a product. The *production concept* is characterised by consumers who are more interested in getting the product than specific characteristics of the product and they will buy a product which is readily available, rather than wait for the one they prefer (Schiffman and Kanuk, 2007:5).

The *product concept* assumed that consumers would buy the product with the highest quality, the best performance and the most features (Schiffman and Kanuk, 2007:5). This orientation encourages an organisation to constantly strive to improve the quality of its products and to add new features to its products, without confirming whether the features are desired by the consumer (Schiffman and Kanuk, 2007:5).

The next stage, after the *production* and *product concepts*, is the *selling concept*, in which the primary goal of the organisation is to sell the product(s) that it has decided to produce (Schiffman and Kanuk, 2007:5). Until the 1950s “marketing” was equated with “selling” and a large sales volume was considered to be the key to profitability (Webster, 1988). The selling concept assumes that consumers will be unlikely to purchase a product unless they are aggressively persuaded to do so (Schiffman and Kanuk, 2007:5). The focus of marketing with this approach is short-term and on the selling process itself; in other words personal selling, advertising and sales promotions (Webster, 1988). A problem associated with this approach is that it does not consider consumer satisfaction; if a consumer is persuaded to purchase a product they do not want or need, they will be highly unlikely to purchase it again in the future and they might communicate their dissatisfaction to other potential consumers (Schiffman and Kanuk, 2007:5).

During the 1950s the American economy matured into a consumer society as there was an abundance of manufacturers and brands and the *selling concept* was replaced by the *marketing concept* (Webster, 1988). The *marketing concept* is a consumer-oriented marketing philosophy that considers the needs and wants of the consumer first (Schiffman and Kanuk, 2007:5). The *marketing concept* is also sometimes referred to as the contemporary era of marketing; the primary purpose of marketing at this stage of development is not to find and persuade a consumer to buy what the company produces, but to focus on satisfying the needs of the consumer and to implement a philosophy of consumer orientation within the organisation (Mihart, 2012). The organisation has a long-term strategic orientation and offers tailored products and an integrated mix of marketing elements (Webster, 1988).

Sonic branding and the idea of using both sound and music more strategically to connect with the consumer and to create a distinctive image for the brand in the mind of the consumer is a concept that resonates well the foundations of the *marketing concept*. When selecting the ideal sound for a brand, it is important to consider who the consumer is and which sound would appeal most to the target market of the brand. Both music and sound have the ability to connect with individuals on emotional and subconscious

levels. However, in order to truly benefit from the use of these elements, it is important that the right piece of music or sound is selected for the brand.

During the 1970s there was a significant increase in branding. Many companies began to realise the value of using a brand name and the value of the brand itself. An increase in advertising expenditure was also associated with this phase as many companies attempted to build their own brands. In terms of understanding when exactly the different auditory elements started to play a role in marketing, it was more than likely during this phase, when many companies started to create distinguishing images for their brands. However, despite the fact that many companies utilised music and jingles in advertising, the true value of associating a brand with an auditory element was not yet fully utilised.

The current era is known as the modern era and it is characterised by the rise of the internet and an increasing awareness of the sensory attributes of products (Krishna, 2013:25). At this stage of development, brand managers are more aware of the value of utilising sensory elements to establish a strong and valuable relationship between the brand and the consumer. However, despite an increase in awareness of the value of using sensory elements to distinguish a brand, there are still many brands that do not fully utilise the opportunities to connect with the consumer on a sensory level. Most brand managers have a good understanding of using visuals to communicate with the consumer. However, many of the opportunities associated with using audio, olfactory and touch elements are not fully utilised.

2.3 DEFINITION OF MARKETING

Definitions within academic disciplines have important applications. Formal definitions assist in distinguishing one discipline from another, defining the boundaries of research domains and identifying the areas that require further investigation (Zinkhan and Williams, 2007). Marketing is considered a discipline as it is a body of thought, a managerial process, and a specific approach to managing an organisation and it requires a specific set of professional skills (McDonald and Meldrum, 2013:7).

Simply put, marketing can be defined as a method of communicating an offering to a customer in such a way that it attracts attention, convinces the consumer to buy and initiates the purchase (Va, 2015).

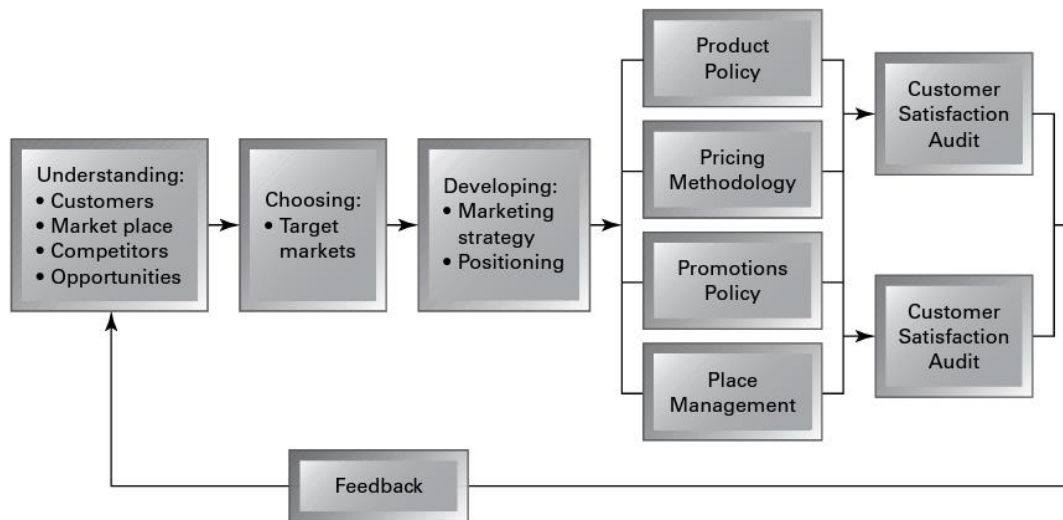


Figure 1.1 Marketing as a business process

Source: McDonald and Meldrum, 2013:7

Marketing plays a key role in most organisations. Figure 1.1 illustrates marketing as a business process. From Figure 1.1, it is evident that an important part of marketing is to have a solid understanding of the target market, competitors and potential opportunities. Thereafter, the target market is identified, marketing and positioning strategies are developed and strategic decisions with regard to the marketing mix are made. Finally, it is also important to evaluate the consumer's perspective of the offering and to gain more insight and a deeper understanding of the consumer by means of these evaluations.

2.4 THE IMPORTANCE OF MARKETING

The business environment has changed drastically over the last few years and there are a number of different opinions on how important marketing and the roles of marketers are in most organisations.

Marketing has been recognised for quite a while as important for the long-term survival and success of most organisations (McDonald and Meldrum, 2013:3). When analysing the practices of successful companies in the world, it is evident that they make use of comprehensive marketing strategies within their management processes. In contrast, in less successful organisations, marketing is often something that is not done particularly well (McDonald and Meldrum, 2013:3).

It is evident that the marketing capability of an organisation plays an important role in its performance. Research has indicated that marketing has a stronger impact on an organisation's performance than R&D

or operations and that it is vital in order to increase shareholder value (Krasnikov and Jayachandran, 2008). In every size of organisation (small, medium or large) a strong and influential marketing department has the ability to increase the success of an organisation (Wirtz, Tuzovic and Kuppelwiese, 2014). Successful marketing has the ability to generate tangible benefits for an organisation, such as customer acquisition and retention, managing customer relationships and being responsive to the needs of the consumer (Krasnikov and Jayachandran, 2008).

In the current competitive economic environment, it is particularly important for organisations to have accurate and detailed information about their consumers' needs, motivations, attitudes and actions in order to survive (Mihart, 2012). Understanding the consumer is a key function of the marketing department and an organisation's performance can be significantly improved if the marketer has a good sense of the complexities of the market (Wirtz et al., 2014). The better an organisation understands their consumers, they more likely they are to make products that truly serve the needs of their consumers, create marketing communications that resonate with the beliefs of their consumers and establish a unique brand image that also represents the identities of their consumers. A good marketing department also has the capability to sense and manage environmental changes and retains responsibility over the four Ps (promotion, product, place and price) in an organisation (Wirtz et al., 2014).

2.5 THE MARKETING MIX

In order to generate a better understanding of the various factors that influence the marketing of an organisation, a distinction is made between the marketing mix and the marketing environment (McDonald and Meldrum, 2013:4). The marketing mix is the offering that is in the organisation's control and the marketing environment is the set of uncontrollable variables within which the marketing process takes place (McDonald and Meldrum, 2013:4). The marketing mix is typically classified as the four Ps: product, price, promotion and place (McDonald and Meldrum, 2013: 4).

The marketing mix also involves the main demand-influencing variables that are available to an organisation, because when a customer makes a purchase or engages in an exchange with a supplier, they are not only responding to a product but a whole range of variables that constitute the offer (McDonald and Meldrum, 2013:11).

Both at conscious and subconscious levels, customers are continuously doing matching exercises between their needs and wants and the products available in the marketplace (McDonald and Meldrum, 2013:6). If the match is sufficiently good, they will purchase the product (McDonald and Meldrum, 2013:6). A match is often created by manipulating and managing the marketing mix, as well as monitoring and evaluating the marketing environment (McDonald and Meldrum, 2013:6).

It is important for a product to have a unique identity in the eye of the consumer. Successful organisations use one element or a combination of different elements of the marketing mix to establish a superior position and do not offer an undifferentiated product/service to a wide market (McDonald and Meldrum, 2013:34).

2.5.1 Product

Products can vary in terms of quality, tangibility, size, functionality and range (McDonald and Meldrum, 2013: 4). The decisions that marketers make with regard to brand strategies, and therefore sonic logos, are often considered an element of the product element of the marketing mix.

2.5.2 Price

Pricing decisions are highly important. The price can be high or low, and can involve a discount or be affected by credit terms (McDonald and Meldrum, 2013:4). A fundamental issue with pricing is whether an organisation should charge a premium price or not (Slater and Olson, 2001). The price strategy selected by an organisation will affect consumers' perceptions of the brand.

2.5.3 Promotion

Promotion can include television advertising, the domain of sales people, branding, public relations and social media (McDonald and Meldrum, 2013:5). Advertising is used to create awareness and interest and to reach a broad market (Slater and Olson, 2001). Sonic logos are branding elements that are often used in advertising, and therefore the promotion element of the 4 Ps is highly relevant to this study.

2.5.4 Place

Place refers to the channels that are selected to make a product available, as well as the service elements involved in delivering the offering (McDonald and Meldrum, 2013:5). In terms of place, a typical choice is whether a selective or an intensive distribution system will be used. Certain products that entail substantial pre- or post-sale services, have high costs associated with stocking and selling or are positioned as prestige products, will usually use a selective distribution system (Slater and Olson, 2001).

2.6 CURRENT SITUATION IN MARKETING

There are a number of factors that significantly influence the complexity of the marketing environment at this stage: media and channel fragmentation, growth of social networks, user-generated content and the development of digital (Sciarrino, 2014). Since consumers constantly interact with brands on digital

platforms, they can no longer afford to not tailor their offerings and methods of communications to attract and retain the interest of consumers (Va, 2015).

One of the significant changes in marketing today is the way in which market structures have been changing globally. Many trade barriers are being withdrawn and the global market is increasingly emerging as a new opportunity for businesses (Baisya, 2013:39). In this process, many products and services are freely moving from one part of the world to another and they need to be globally competitive (Baisya, 2013:39). The reality, however, is that consumers in different countries are not the same and their differences ought to be considered (Cleveland, Laroche and Papadopoulos, 2009). Organisations need to design, develop and market products and services in a dynamic global business environment that can successfully cross cultural borders (Baisya, 2013:39).

Marketers are also facing increased competition from domestic players, such as small regional players who have their protected niches, as well as foreign brands who force them to spend more on advertising and promotion and thus their profit margins are shrinking (Baisya, 2013:42).

It is clear that the marketplace has changed drastically due to major societal forces, such as technological innovations and advances, globalisation, deregulation and competition (Baisya, 2013:41). The development of technology has significantly altered the number of channels available to marketers, when and where consumers process communications and whether communications are actually processed by the consumer (Keller, 2009). The large number of channels available to communicate with the consumer present certain brand management challenges. From a micro perspective, each individual channel and communication option must be managed to maximize their direct sales and brand equity effects and from a macro perspective all channel and communication options must be designed and implemented in such a way that the sales and brand equity effects will be synergistic (Keller, 2010). It is also important for marketers to consider the influence of new technologies, such as digital video recorders (DVRs) that allow individuals to fast-forward through advertisements (Winer, 2009).

Because the development of technology has significantly increased the number of platforms available to the marketer to communicate with the consumer, the media environment has become highly cluttered. The average consumer is exposed to 3 000 to 5 000 ad messages per day (Keller, 2009). The amount of media options available to the marketer have increased significantly and the use of a novel medium have been associated with a more long-lasting and dynamic effect on brand perceptions than advertising in a traditional medium (Dahlén, Friberg and Nilsson, 2009). Although traditional advertising media such as TV, radio, magazines and newspapers are no longer considered as effective as they used to be (Baisya, 2013:42), they still have an impact on brand awareness and a combination of traditional media and social media ought to be used to influence brand equity positively (Bruhn, Schoenmuller and Schäfer, 2012).

Research has also indicated that new and traditional forms of media have the ability to function well together and complement one another (Onishi and Manchanda, 2012).

The marketplace has also changed dramatically. Customers are more knowledgeable and they are increasingly demanding better quality and shopping more intelligently than before (Baisya, 2013:41). Consumers have more choices in terms of which media they use and they are also able to choose whether and how they would like receive communications (Keller, 2009). Consumers have more influence than in the past as they define the rules of engagement, what information they need and what offerings they are interested in (Bruhn et al., 2012).

Consumers are more in charge of the content they choose to engage with and it is highly important for marketers to create communications that capture the attention of the consumer. One of the most significant issues associated with convincing the consumer to pay attention to an advertisement is multi-screening. Multi-screening is the attempt to engage with two or more devices at the same time, such as checking a mobile phone while watching television (Ipsos Connect, 2015). In the United States, 54% of adults and 79% of 15-24s 'multi-screen' weekly; and the average household has four internet-enabled devices (Ipsos Connect, 2015).

It is generally believed that the task of the marketer is becoming increasingly more difficult and challenging with the competition triggered by forces of globalisation (Baisya, 2013:1). There is a need for strategies that can overcome competitive forces and challenges and still deliver value for shareholders (Baisya, 2013:1).

2.7 DIFFERENT AREAS OF MARKETING

Marketing is a discipline that consists of a number of different areas that function together.

2.7.1 Brand management

One of the most important areas of marketing today is the strategic management of a brand. Every decision that is made in terms of the image or the positioning of a brand is related to strategic management. The choice of the sonic logo, similar to the visual logo of a brand, is therefore an important strategic decision that has to be made and influences how the brand is presented to the consumer, as well as what the brand means to the consumer.

Strategic brand management focuses on using the design and implementation of marketing programmes and activities to build, measure and manage brand equity (Keller, 2003:44). It typically focuses on identifying and establishing a brand's positioning and values, planning and implementing the marketing

programme, measuring and interpreting the brand's performance and growing and sustaining brand equity (Keller, 2003:44). Consumer-brand relationships are the psychological bonds that form between the consumer and the brand which are essential to developing loyalty towards the brand (Tsai, 2011).

2.7.2 Advertising

There are also other areas of marketing where sonic branding or the strategic use of sound plays an important role. Audio is a very important element to consider in advertising. Certain advertising platforms, such as radio, rely solely on the power of audio. Others such as television advertisements or online videos use a combination of visuals and audio to communicate a specific message about the brand. It is very important in advertising to understand how sound and music can be used more strategically to emphasise a certain message or induce a specific emotional feeling in the consumer.

Advertising is important and relevant to many different types of organisations (McDonald and Meldrum, 2013:15). Advertising still plays an important role in building long-term equity by creating brand awareness and forming certain associations and attitudes (Teixeira, Wedel and Pieters, 2012a). In order to manage advertising well, it needs to be considered an investment rather than a cost and like any other investment it is only going to be good if it achieves a return (McDonald and Meldrum, 2013:15). This is one of the most important reasons why neurophysiological measurements ought to be utilised in advertising research. It is beneficial for organisations to have more knowledge on the success probability of an advertisement before its launch.

The reality is, however, that it has become more difficult to reach consumers through advertising. Consumers are increasingly using other electronic media devices in addition to television. There are also many consumers who have access to PVR which allows them to record and replay television content and fast-forward through the advertising breaks (Teixeira et al., 2012a). Therefore, it is very important to create advertising for a brand that will be emotionally engaging. It is also important to ensure that there is a strong and clear link between the brand and the advertisement, as consumers might not be exposed to the advertisement as many times as they would have been in the past. A strategic way for the marketer to ensure that the consumer knows which brand is connected to the advertisement is to use specific branding elements, such as a sonic logo, at every touch point and across different marketing campaigns.

2.7.3 Digital marketing

Digital marketing has become a crucial tool to communicate with consumers and build the identity of a brand. There are a number of different platforms in digital marketing. It is important that the digital

platform selected is well suited to the image of the brand and that online marketing activities are aligned with other communications and a natural extension of who the brands are (North and Oliver, 2014).

An element of digital marketing is social media. The use of social media has influenced the lifestyles and ways of individuals significantly. According to Tiago and Veríssimo (2014), the quick growth of web-based platforms that enable online social behaviour – for example, Facebook – has considerably altered the nature of human activities, habitats and interactions and many real-world social relationships have moved to the virtual world and resulted in online communities with people from across the globe. Marketers have to consider the presence of their brands on social media.

2.7.4 Consumer Behaviour

Another area of marketing that should be considered when studying sonic branding is consumer behaviour. Certain sensory elements have the ability to influence the consumer's experience of a product or brand. Understanding the value of strategic sensory decision from the consumer's point of view enables the brand to better understand the impact of these elements and the importance of taking them into consideration.

Consumer behaviour is defined as the behaviour that consumers demonstrate when searching for, purchasing, using, evaluating and disposing of products and services that they assume will fulfil their needs (Schiffman and Kanuk, 2007:4). The study of consumer behaviour focuses on how an individual will make a decision to spend his/her available resources – such as time, money and effort – on consumption-related items; this will include what they buy, when they buy it, where they buy it, how often they buy, how often they use it, how they evaluate it after the purchase, how the evaluation impacts future purchase decisions and how they choose to dispose of it (Schiffman and Kanuk, 2007:4).

2.8 SUMMARY

The sonic logo is a brand element that is often used by brands to create a unique and meaningful identity for the brand. The use of a sonic logo to distinguish a brand is strongly rooted in the concept of branding. Branding is an important element of marketing. In order to understand the function of the sonic logo and the value it can create for a brand, it is necessary to first distinguish what marketing is.

This chapter provided a brief overview of marketing. Firstly, it discussed the history and definition of marketing. Thereafter the importance of marketing, the current issues in marketing, the marketing mix and the different areas of marketing were discussed.

CHAPTER 3

BRANDING

3.1 INTRODUCTION

Branding is an important part of the domain of marketing. A well-developed brand can have a powerful influence on consumers and make a contribution to the way a product or organisation is positioned in the marketplace (McDonald and Meldrum, 2013:179). The concept of branding has to be considered when studying sonic branding, as it is a technique that can be used to distinguish a brand from others and communicate the brand's positioning to consumers. Therefore, in order to understand the value of using a sonic logo as a brand element, it is necessary to explore the related theoretical foundations of branding.

This chapter provides some insight into branding and the theories that are relevant to studying sonic logos. The first part of the chapter focuses on where the concept of branding comes from, the definition of branding, the value of a brand and other brand concepts. The second part of the chapter focuses on other types of branding specifically related to sonic branding, such as emotional branding and sensory branding.

3.2 DEVELOPMENT OF BRANDING

Before the concept of branding was widely adopted as a business practice, brands were not often associated with the retail environment. Many products distributed to consumers were sold as staples in bulk and, typically, the one general store in town would carry commodities such as sacks of coffee beans, slabs of cheese and barrels of pickles without naming the specific source of the product (Bastos and Levy, 2012).

Modern brands started developing in America and Britain towards the end of the nineteenth century as a result of macro and micro economic factors (Heller and Kelly, 2015). Producers started packaging and labelling, thus adding the identity of the source to the product (Bastos and Levy, 2012).

Keller (2003:3) suggests that the idea of branding originated from the practice of labelling goods to distinguish them from one another. Similar to how brands are perceived today, the name of the producer slowly became regarded as an added source of value for the product (Bastos and Levy, 2012). A brand functions as intellectual property, differentiates a product and enhances market competitiveness by easing recognition of the product and assuring a specific level of quality (Heller and Kelly, 2015).

Defining the value or worth of an organisation has played a major role in the development of branding. In the early 1980s, the value of an organisation was typically measured in terms of its physical and tangible

assets, such as land, buildings, manufacturing facilities, equipment and technology (Baisya, 2013:14). However, this point of view quietly changed over time. Recently, many organisations have started to realise that the real value of the business often lies outside of the business and more specifically in the minds of the potential and target consumers and current customers (Baisya, 2013:15). In other words, what consumers believe and think about a brand is important and should be considered a significant indication of the value of the brand.

It is apparent that the importance of branding has increased significantly in the last thirty years. Branding has evolved from an idea of ownership and reputation to brand image, symbolic values and relationship (Bastos and Levy, 2012). Today, many organisations consider their brands to be their most important assets. The abilities of the Coco-Cola logo and Nike swoosh to trigger myriad response and arouse passion in the consumer proves that branding has significant value (Cayla and Arnould, 2008). The importance of branding is also evident from the thousands of brand consultants who specialise in offering guidance on managing brands and creating strong brand image (Bastos and Levy, 2012). In today's market, the competition between brands has increased significantly as the number of brands has radically increased, promotional expenditure has risen and it has become more difficult to sustain a meaningful brand distinction (Kay, 2006). Despite the fact that the importance of branding is being recognised, there are still different points of view on what the definition of branding is and the exact role it should fulfil within an organisation.

3.3 DEFINITION OF BRANDING

Brands and the concept of branding are defined in many different ways. At the most basic level a brand is known to be a marker for the offering of a firm (Keller and Lehmann, 2006). From a legal point of view, a brand is defined as a symbol that distinguishes an organisation's products or services from others in the same category and confirms its place of origin by means of its unique style, pattern, design, colour scheme and graphics (Baisya, 2013:15). A brand can also be anthropomorphised and many brands are regarded as cultural symbols (Budac and Baltador, 2014). The function of a brand is to create meaning (Kay, 2006).

In order to successfully brand a product, it is necessary to educate the consumer who exactly the product is and what its brand values are. It is typically achieved by giving the product a name and using specific elements to identify it (Keller, 2003:13). Branding is considered to be the initial means used to build consumer awareness by identifying the offer and distinguishing it from other products and services within the category (Kay, 2006).

The branding activity of an organisation is concerned with more than merely the style and visual identity of the brand. In order for an organisation to brand a product successfully and establish a strong identity, the consumer's perception of the brand has to be considered. For most consumers, brands are in fact pieces of information, meanings, experiences, emotions and intentions that are connected to one another by neural links of varying strengths (Walvis, 2008). A brand ought to know what meaning, information and emotion are connected to it in order to develop and maintain the relationship and connection between the brand and the consumer.

According to Keller (2003:13), branding involves the creation of mental structures that assist consumers in organising their knowledge about products and services in a way that simplifies their decision-making and in the process, provides value to the organisation. The purpose of branding is to create strong associations for the brand that will support consumers when they are making buying decisions. There are several different types of associations that a brand can use and sonic branding is a specific type of brand association. Branding is also considered a process of establishing effective, choice-shaping associations with the brand name in the minds of the target group members (Walvis, 2008). The differentiating factor between a brand and a commodity is based on the concept of *added values*; a brand is considered more than the sum of its component parts and symbolises certain additional traits for the user (McDonald and Meldrum, 2013:180).

An important function of branding is to ensure that consumers are familiar with the brand name and that they know what the brand represents. The consumer should recognise the brand name, as well as the sonic logo, jingle or any other element that is associated with the brand.

3.4 THE IMPORTANCE OF BRANDING

It is evident that branding has become an important priority for many organisations in the last decade and today brands are considered to be one of the most valuable intangible assets that a company can have (Keller and Lehmann, 2006; Farhana, 2012). A well-developed brand can have a powerful influence on both customers and competitors alike, and should make a fundamental contribution to the way a product or organisation is positioned in the market (McDonald and Meldrum, 2013:179).

Branding is considered a necessary means of building sales by identifying products or service (Kay, 2006). Generally, the primary purpose of branding is to be selected by consumers and branding is the activity that is focused on increasing the likelihood that it will be selected (Walvis, 2008). Different brand associations and brand elements can play important roles in creating a unique and memorable identity for a brand and increasing the likelihood that the brand will be selected, instead of a competing brand. It is important to consistently and continuously communicate the identity of the brand to the consumer and

establish a strong identity as there are significant benefits associated with a familiar brand. Brands influence consumers' choices every day. Many organisations are realising that when product differentiation among several options is limited, it is the brand that has the most influence that affects the buying decision (Baisya, 2013:72). Creating and maintaining a brand for a product is also a good way of developing and maintaining a relationship with the consumer without the need for personal contact (McDonald and Meldrum, 2013:45).

The value associated with a strong brand has influenced the way in which many organisations conduct business. Organisations around the world are spending billions of dollars each year to build strong brands (Walvis, 2008). However, not all branding is effective. There are many products and services that have brand names, but they are not necessarily successful brands. Successful brands tend to require continuous investment to avoid diminution (McDonald and Meldrum, 2013:180). Continual marketing activity that promotes the brand will assist the consumer in learning who the brand is and what the product can offer the consumer.

A strong brand can provide a sustainable competitive advantage and assist organisations in becoming appealing both as employers and potential businesses partners (McDonald and Meldrum, 2013:180). It can, therefore, improve the quality of the employees who are attracted to the organisations and thereby ensure that a high level of quality is maintained in the organisation in the long term. A strong brand also gives an organisation more influence in the market. A strong brand can assist in establishing distribution networks, enable brand extensions and strengthen pricing flexibility (Kay, 2006). It is also able to negotiate more with retailers in terms of price, shelf location, competitor positioning, merchandising, promotions policy and acceptance of new products (McDonald and Meldrum, 2013:46).

A successful brand has a unique identity that is widely recognised by the target market (McDonald and Meldrum, 2013:180). Generally, the brand is one of the most important differentiators for the customers' selection of products when a choice has to be made between many similar products (Baisya, 2013:16). When consumers are faced with many different options, they will more than likely select the brand they trust and with which they are most familiar. Strong brands are easily identifiable by their packaging and visual logos, because they are familiar to the consumer. The distinctiveness of a strong brand and its brand element allow customers to recognise specific products and services (De Chernatony and McDonald, 2001:38). Successful brands manage to simplify the consumer's choice, promising a specific level of quality and reducing buying risk (Keller and Lehmann, 2006). The sonic logo of a brand and other brand elements can also be used as means to distinguish the brand and assist the consumer in identifying the brand.

Brands also play an important role in influencing the effectiveness of a marketing campaign (Keller and Lehmann, 2006). Measurements such as brand recognition, brand recall and attitude towards the brand are often used to assess the influence on consumers of a specific marketing campaign. Intangible benefits associated with a specific brand that are often communicated in advertising can also have a significant influence on a consumer's choice and therefore, also plays an important role in increasing the value of the brand.

There are also significant financial benefits to gain from a strong brand. Strong brands can improve and enhance demand by providing the benefits of increased sales volume, higher price and the potential of more brand-stretching (Baisya, 2013:1). They provide a firm base for expansion into product improvements, variants, added services, new countries and can assist to protect organisations against the increasing power of intermediaries (McDonald and Meldrum, 2013:180). A strong brand also provides opportunities to introduce other products to the market under the same brand name. The financial value associated with a strong brand is one of the principal reasons for investing resources into building and growing a brand and is referred to as brand equity (Baisya, 2013:72).

A strong brand can offer a variety of benefits in terms of satisfying the consumer's rational and emotional needs (De Chernatony and McDonald, 2001:21). Many strong brands have "personalities" with which consumers can identify and that evoke feelings in consumers that match their personal values, aspirations and lifestyles (McDonald and Meldrum, 2013:46). Consumers are more likely to be attracted to these types of brands. Some of the emotional needs of a consumer are subconscious and he/she will not necessarily be aware of them or of their influence. In the same way, a brand can influence the consumer at a subconscious level. It is important to be aware of the role that subconscious feelings can play. In order to increase the probability that a brand will be selected, a brand must also win the subconscious battle for awareness (Walvis, 2008). Brands that are able to connect with the consumer on an emotional level are particularly valuable. Strong brands have the ability to become cultural symbols that can be linked to the identity of the consumer. As a result, the brand logos of strong brands will sometimes be bought and collected on products that are not necessarily related to the original product of a brand, such as the Chanel or Armani logos that are placed on T-shirts or the Disney logo and characters that appear on a range of different products (Kay, 2006).

3.5 BUILDING A RELATIONSHIP BETWEEN THE CONSUMER AND THE BRAND

The consumer psychology model of brands suggested by Schmitt (2012) plays an important role in understanding the consumer's interaction with the brand and how the relationship between the consumer

and the brand is built over time. The model can also be utilised to better understand the different levels of brand engagement with which the sonic logo of the brand can be involved. The elements depicted in the model and how sonic branding – specifically the sonic logo of a brand – can be related to the model, will be discussed.

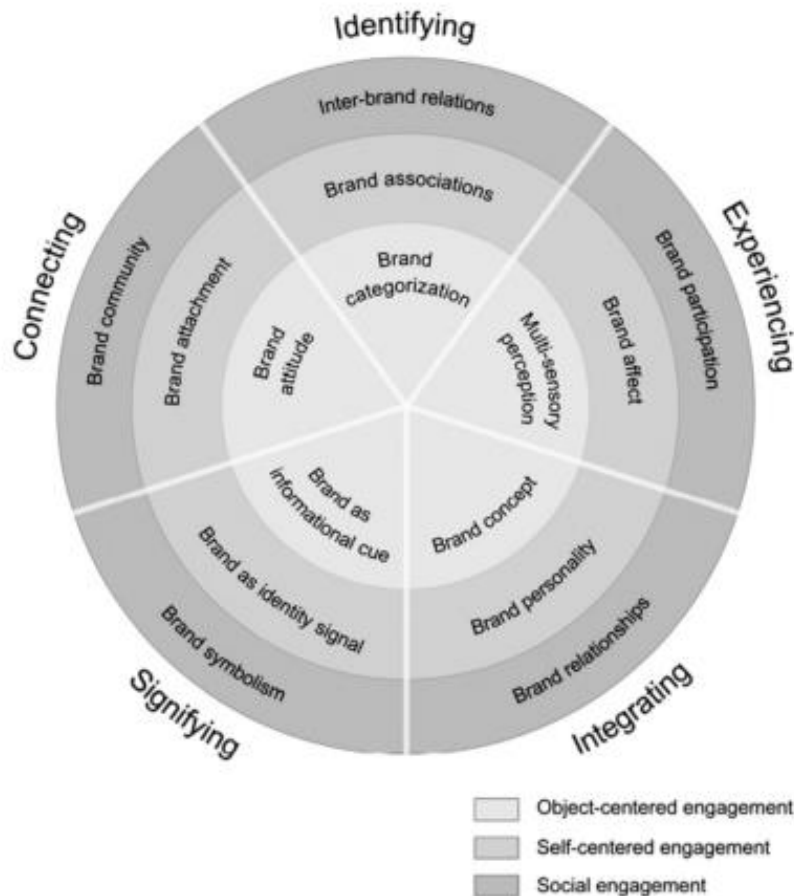


Figure 2.1: The consumer psychology model of brands

Source: Schmitt, 2012

The model suggests that different consumers will have different levels of psychological engagement with brands because they have different needs, motives and goals (Schmitt, 2012).

The different levels of engagement are represented in the model with three layers.

3.5.1 Object-centred engagement

The inner layer focuses on object-centred, functionally-driven engagement; in other words, the consumer collects information about the brand with the goal of receiving utilitarian benefits from the brand

(Schmitt, 2012). At this level, the user requests information related to the brand in order to obtain the benefits of its utility (Budac and Baltador, 2014). The sonic logo of a brand does play a role in representing information about the brand and its utilitarian benefits for the consumer. The sonic logo forms a part of the consumer's interaction with the brand, especially if the sonic logo is incorporated in the product usage of the brand. An example is the sonic logo of the Samsung brand, where the sonic logo is heard every time the consumer switches on his/her Samsung electronic device. The sonic logo is able to communicate information to the consumer about the capability of the product. If the sound of the sonic logo is well suited to the brand and expresses a certain level of quality and product performance to the consumer, the sonic logo could play an important role in the first level of engagement: the object-centred engagement.

3.5.2 Self-centred engagement

The middle layer of the model focuses on self-centred engagement where the brand is seen as personally relevant to the consumer (Schmitt, 2012). In other words, in order for the brand to build a strong relationship with the consumer, it is important that the consumer feels that he/she can identify with who the brand is and what it stands for. Albert, Merunka and Valette-Florence (2013) also suggest that a sense of identification by the consumer towards the brand is critical to establish passionate feelings towards the brand. It is often during this level of engagement when the consumer would define his/her view of the brand as positive, negative or neutral. The resources held by a brand will be regarded as positive if they are directly relevant to the consumer's goal of self-expansion (Park, Eisengerich and Park, 2013).

The sonic logo of a brand can be used to communicate specific personality traits of the brand that the consumer would relate to and find personally relevant. An example of a brand that utilises its sonic logo as a form of self-centred engagement is McDonalds. The sonic logo: "I'm lovin' it" suggests that the brand has a fun-loving personality that embraces life and every opportunity. Many consumers share this point of view and would, therefore, also find it relevant to "who they are".

3.5.3 Social engagement

The outer and final layer of the model represents social engagement with the brand; the brand is seen from an interpersonal and socio-cultural perspective and it offers a sense of community (Schmitt, 2012). The sonic logo can play a role in the community of the brand in the sense that consumers of the brand are all familiar with the sonic logo and understand its connection to the brand. The sonic logo can act as a representation of the brand. A sonic logo can be utilised across more than one platform. For example, it can be used as a personal ringtone or message tone for a cell phone. If members of the brand community

utilise the sonic logo as a message tone, it would signify to others their loyalty towards the brand and create a social interaction around the brand.

It is important to note that moving from the inner to the outer layer of the model is a representation of how the brand becomes more meaningful to the consumer (Schmitt, 2012). From a branding perspective, it is important that the sonic logo of a brand is involved at every level of the consumer's engagement with the brand. Multiple interactions with the consumer will ensure that the sonic logo becomes a strong and meaningful brand association. Also, if the sonic is involved at more than one level of brand engagement, it is more likely that the consumer would develop a positive emotional connection toward both the brand and its sonic logo.

3.5.4 Brand-related processes

The consumer psychology model of brands depicted in Figure 2.1 also incorporates five important brand-related processes: identifying, experiencing, integrating, signalling and connecting with the brand. *Identifying* refers to the process by which the consumer identifies the brand and its category, form valuable associations and compares the relations between brands (Schmitt, 2012). The sonic logo of a brand plays an important role in distinguishing the brand from those of its competitors and creating a unique identity for the brand. The sonic logo also acts as a powerful brand association that represents the brand on an auditory level.

The process of *experiencing* refers to the sensory, affective and participatory experience that the consumer has with the brand (Schmitt, 2012). The sensory experience that a consumer has with a brand can play a key role in the consumer's perception of the brand. According to Park, Eisingerich and Park (2013), the psychological distance between the brand and the consumer will be small if the consumer has appreciation for its sensorial or aesthetically pleasing qualities. An example of a brand that uses its sensory attributes well is Starbucks. Starbucks induces pleasure from its use of sensory modalities, such as its hot, strong tasting coffee with a pleasant aroma as well as a visually and aurally pleasing retail atmosphere (Park et al., 2013). However, if a brand has sensorial or aesthetically displeasing qualities, the psychological distance between the brand and the consumer will be large (Park et al., 2013). The sonic logo of a brand is also a form of sensory branding and it interacts with the consumer's sense of hearing.

Integrating refers to combining all brand information into a general brand concept, personality and relationship with the brand (Schmitt, 2012). The sonic logo is part of the integrating process as the consumer considers it as one of the brand elements that forms a part of the brand's identity.

Signifying refers to the use of the brand as an informational cue, identity signal or a cultural symbol (Schmitt, 2012). Brands can act as powerful symbols in society and represent different things to different consumers. The audio logo can communicate certain ideas about the brand to the consumer. A brand that utilises a modern, up-tempo, electronic sound as an audio logo suggests to the consumer that it is young and current. If a brand chooses to use a more traditional or classical sound as an audio logo, it might suggest to the consumer that the organisation is more old-fashioned, traditional or timeless.

The final process depicted in the model is *connecting*. *Connecting* with the brand refers to the idea of forming an attitude toward the brand, becoming personally attached to the brand and connecting to the brand community of the brand (Schmitt, 2012). As music and sound often have a strong emotional influence on the consumer, the sonic logo could also assist the process of forming a personal attachment between the consumer and the brand.

It is important to note that the processes included in the consumer psychology model of brands depicted in Figure 2.1 are not always one-directional and even though the constructs are depicted as conceptually distinct, one construct may overlap to some degree with another and the different constructs may interact with one another (Schmitt, 2012).

Unlike many other information processing models, the consumer-psychology model focuses specifically on the distinctive properties of brands (Schmitt, 2012). Many of the elements included in the consumer psychology model play a key role in building a strong brand that has a significant connection with the consumer.

3.6 BRAND CONCEPTS

There are a number of different brand concepts that are related to sonic branding and specifically sonic logos.

3.6.1 Brand positioning

Brand positioning is the specific, intended meaning for the brand in the minds of the consumers which also communicates how the consumer will benefit when using the brand; it explains why using the specific brand will be a superior means to accomplish a specific goal (Nandan, 2005). Most consumers select brands that represent their own beliefs and fit well with their own self-images.

The sonic logo or any other elements associated with the brand should support the positioning of the brand. An example of a sonic logo that supports the positioning of its brand well is the sonic logo used by Intel. Since Intel is a technological organisation, its desired brand positioning is to be seen as modern,

cutting-edge and in touch with the latest industry developments. The specific notes in the Intel sonic logo and the sound of it suggests that the brand is both modern and cutting-edge. The sonic logo used by McDonalds resonates well with the brand's positioning. The "I'm lovin' it" sonic logo that was first introduced to consumers in the form of a soundtrack, then a jingle with words and finally only a small part of the original tune, communicates to the consumer that the brand represents the idea of enjoying and embracing life.

3.6.2 Brand associations

Brand associations typically allow marketers to differentiate position and extend their brands (Low and Lamb Jr., 2000). The sonic logo and the other audio elements of a brand could be considered brand associations. Brand associations assist in creating positive thoughts and feelings towards the brand and suggest the benefits of purchasing a specific brand (Low and Lamb Jr., 2000).

Associations that are directly linked to the brand – in other words, the ideas thought of first as most descriptive of the brand – are believed to be most important in describing the brand and its significance for the consumer (French and Smith, 2013). With certain brands, the sound of the sonic logo has become so strongly associated with the brand that it could be considered directly linked to the brand. The Intel brand is an example of such a brand. The sonic logo of the brand is so well-known that most consumers are actually more familiar with the audio logo than the visual logo of the brand.

Associations that are not as close to the brand are less important because they are not directly linked to the brand and are often not considered descriptors of the brand (French and Smith, 2013). The strength of the brand association is influenced by the number of associations, the strength of the links between the associations and the structure of the associative network (French and Smith, 2013)

Ideas are often considered as nodes in a large network, referred to as an associative memory network model (Kahneman, 2011:52). The model suggests that each idea will be linked to many other ideas and that there are different types of links between the ideas. The current idea of how the associative memory works is that multiple things occur at the same time and that one activated idea will not merely evoke another idea, but in fact, many other ideas which in turn will activate others as well (Kahneman, 2011:52).

In terms of sonic branding and the sonic logo of a brand, the associative memory network model would suggest that the sonic logo has the ability to activate multiple ideas in the mind of a consumer. Therefore, the sound of the sonic logo would not only remind the consumer of the brand name, but many other ideas related to the brand and the sound. For example, if a consumer hears the sonic logo "I'm lovin' it" by

McDonald's, this could activate the brand name (McDonald's), the location of the McDonald's store the consumer has visited in the past, the quality of the McDonald's product and the consumer's general feelings towards the brand and what it represents.

It is also important to consider that only some of the activated ideas are actually registered in the consciousness of the consumer. Many of the ideas in associative thinking occur at a subconscious level and the consumer may not be aware of them (Kahneman, 2011:52). The concept of processing an idea at a subconscious level is important in the use of sonic branding. Consumers are often not consciously aware of the influence of certain sounds, but it does play an important role in the memory of the consumer, specifically with regard to how a certain brand is perceived. Chapter 4 discusses in more detail the role and the value of the subconscious with regard to consumer behaviour.

3.6.3 Brand Elements

As creating and maintaining a strong brand is a priority, many companies invest a significant amount of time, money and effort in building and maintaining their brands and ensuring that brand elements are coherent, strongly linked and unique from those of competitors (Friedman and Leclercq, 2015). A brand element is defined as the visual or verbal information that identifies and differentiates a product (Keller, 2003:45). In the fast-moving consumer goods industry, differentiation can be difficult and a distinctive approach to brand elements can assist in establishing a strong image of the brand in the consumer's mind and helping him/her recognise the brand in different situations (Farhana, 2012). Brand elements typically include brand names, logos, symbols, characters, packaging, slogans and jingles. They include any element that the consumer would associate with the brand and that would be considered a representation of the brand in a sense. Brand elements can be used to enhance awareness and facilitate the development of strong, favourable and unique brand associations (Farhana, 2012). The brand elements can also play an important role in building brand equity and assisting consumers to identify the brand. Brand elements can activate the consumer's memory of the brand and encourage the recall of other knowledge related to the brand (Chang, 2014). The general idea is to utilise brand elements to distinguish a brand and its point of difference from those of competing brands (Farhana, 2012). One of the main brand elements is the brand name. The choice of a brand name is important since it often represents the central theme or primary associations of a product in a compact form (Farhana, 2012). Brand names cannot be changed without a substantial risk of losing brand equity (Farhana, 2012). Jingles are another brand element that is often utilised by brands. Jingles are the musical messages written about a brand (Farhana, 2012). They are typically used in advertising. It is important to specifically consider the traits and values of a jingle when studying sonic branding, since it is an element that is often used as a sonic branding device. Characters

are special types of brand symbols that take on human or real-life characteristics (Farhana, 2012). Research has indicated that characters can be an effective marketing tool to enhance brand awareness, brand associations and perceived quality (Chang, 2014). They often have colourful images that attract attention and contribute to brand equity (Farhana, 2012), such as The Colonel for KFC and Ronald McDonald for McDonald's (Chang, 2014).

The logo used by a brand is also a type of brand element. The logo is typically defined as a graphic representation or image that triggers memory associations of a specific brand (Walsh, Page and Vikas, 2010). The logo of a brand can create value for the customers and thereby enhance customers' commitment to the brand by facilitating their self-identity benefits, communicating the functional benefits of the brand to the consumer and providing aesthetic appeal (Park, Eisingerich, Pol and Park, 2013). More than one type of logo can be associated with a brand. The typical brand logo that most consumers are familiar with is the visual logo of the brand. However, there are some brands that also utilise audio as a type of logo. The sonic logo is often used in combination with the visual logo in communications, but it is still a distinctive and unique brand element that would be recognisable without the visual logo of the brand. Since research available on the sonic logo is limited, it is important to consider that studies that focus on the other elements of a brand could be valuable as they could provide some important insights and direction for the study of audio logos.

The strengths and functions of the different brand elements associated with a brand are not necessarily equal (Farhana, 2012). The jingle associated with a brand might be more memorable than the visual logo of the brand. Brand elements can function independently or together. Individually, they can convey direct meaning of the brand to the consumer, but they might not be strong enough to induce a specific response (Farhana, 2012). One ought to select brand elements that can function well individually and that will initiate the brand in the consumer's memory. A significant amount of the marketing budget is spent on communication and advertising that focus on strengthening the links between the brand elements (Friedman and Leclercq, 2015). When working together, brand elements have the ability to give consumers an overall authentic brand experience and increase brand equity (Farhana, 2012). Brand elements ought to be carefully chosen to function together and communicate a consistent message to the consumer and marketers need to have a good understanding of the uniqueness and strength of consumers' mental representations of brands (Friedman and Leclercq, 2015). Successful brands focus on selecting and utilising their brand elements well; sometimes these elements are linked to emotional responses.

3.7 EMOTIONAL BRANDING

Sound and music can play important roles in establishing a strong emotional connection between the consumer and the brand. As the key purpose of sonic logos is to trigger an emotional feeling in the consumer, the use of emotions in branding is important for this specific study.

3.7.1 Different types of emotional branding

Different types of emotions are often considered in branding. Research on emotional branding has considered the relevance of five different emotions – trust, bonding, resonance, companionship and love – and found that bonding and love are usually effective for a wide range of consumer products and that companionship is more effective for functional products, such as gasoline (Rossiter and Bellman, 2012). Establishing a strong emotional connection between a consumer and a brand is a complex process. The emotional relationship between an average brand and the consumer is described as bonding by only about 20% of consumers, and resonance, companionship or love by only about 4% of consumers (Rossiter and Bellman, 2012). Therefore, only a limited number of brands manage to establish a truly strong and meaningful emotional connection between the consumer and the brand.

There are different terms that are typically used in the literature when referring to an emotional connection between the consumer and the brand. One of the most important forms of emotional branding that is often discussed in academic literature is *brand attachment*. In today's marketing world, the consumer's attachment to the brand is a very important consideration (Malär, Krohmer, Hoyer and Nyffenger, 2011) and many brands are focused on developing and maintaining their target markets' brand attachments. It is defined as a measure of the emotional connection between a consumer and the brand and it is believed to have a high correlation with the financial performance of an organisation (Sciarrino, 2014). Research has indicated that emotional attachment to a brand is much harder for a marketer to realise than only a favourable attitude towards a brand (Rossiter and Bellman, 2012). *Brand attachment* also echoes the consumer's feelings towards the brand and it is the emotional bond that connects the consumer to the brand (Malär et al., 2011).

Brand love is also a term that has been used extensively to refer to the emotional connection between a consumer and a brand. *Brand love* is described as more than a preference; it is the brand that a consumer will choose without a reason and it is a connection that is based on more than simply choosing a brand to use (Maxian, Bradley, Wise and Toulouse, 2013). If a consumer can relate to the identity of the brand and experiences a sense of community around the brand, he/she will be more likely to develop a strong emotional connection and *brand love* towards the specific brand (Bergkvist and Bech-Larsen, 2010).

It is important to distinguish between the terms *brand attachment* and *brand love*, because although both are related to an emotional relationship or feelings between the consumer and the brand, they are not exactly the same. Some suggest that *brand love* is a higher-order construct that includes multiple cognitions, emotions and behaviours, and *brand attachment* is an element of it (Batra, Ahuvia and Bagozzi, 2012). Therefore, in order to create *brand love*, *brand attachment* is a pre-requisite (Japutra, Ekinci and Simkin, 2014).

3.7.2 Benefits of emotional branding

There are a number of different benefits associated with successfully using emotional branding and creating a strong emotional connection between the consumer and the brand. If a marketer is successful at tapping the emotions of the target market, consumers will be more willing to trust what their emotions want them to believe (O'Shaughnessy and O'Shaughnessy, 2003:33) and what the brand is communicating to them.

One of the primary benefits is that consumers are typically more loyal towards a brand with which they have a personal relationship and an emotional connection. When marketers encourage strong emotional attachments to brands, consumers are more likely to be devoted to the brands and continuously repurchase those brands (Grisaffe and Nguyen, 2011). Brand attachment is also associated with an intention to recommend the brand, speak positively about the brand and defend the brand when others speak negatively about it (Japutra et al., 2014). Brand loyalty and word-of-mouth are also considered to be outcomes of brand love (Bergkvist and Bech-Larsen, 2010). *Brand love* influences brand commitment and maintains the relationship between a consumer and the brand for both functional and affective reasons (Albert and Merunka, 2013).

Revenue and profit are also less likely to be vulnerable to disruption with emotional purchases (Grisaffe and Nguyen, 2011). If a brand is successful in connecting with a consumer on an emotional level, the odds are typically better that consumers will be more likely to disregard rational thinking and make buying decisions based on their emotional feelings (O'Shaughnessy and O'Shaughnessy, 2003:69). Consumers are also more likely to be willing to pay a premium price (Albert and Merunka, 2013) and believe that the higher price is justified (Batra et al., 2012). Research has also indicated that consumers' strong emotional attachments to particular brands is associated with significantly a greater volume of purchase of these brands and these consumers are far more likely to purchase these brands more regularly than those who simply have a favourable attitude towards brands (Rossiter and Bellman, 2012).

Despite the advantages, many organisations still tend to only focus on the functional value of their brand and on establishing a reputation for consistently delivering products or services that will perform certain

functions reliably (Baisya, 2013:72). For some brands, this could be the best route to follow. The reality is that brands vary in their potential to be loved by the consumer and spending limited marketing resources on mass media advertising to build *brand love* for some brands would not be an effective strategic move (Bergkvist and Bech-Larsen, 2010). It is essential to know who exactly the brand is, what the brand represents for the consumer and how emotions should be utilised strategically to create a valuable emotional connection between the consumer and the brand.

Male and female consumers generally do not interact with brands in the same way. In order to establish a unique and strong position within the marketplace, it is important to understand the differences between male and female consumers in terms of branding. Gender differences are prevalent in the consumers' brand attachment process (Zhang, Benyoucef and Zhao, 2015). Male consumers generally are more interested in comparing their self-concepts with a brand and are concerned about the trustworthiness of a brand, whereas female consumers are more concerned about whether the brand cares about them as consumers and shows interest in them (Zhang et al., 2015).

3.7.3 Associating emotional feelings with brands

There are different ways in which emotions can be utilised in branding. One of the ways that is sometimes used to build a brand attachment is to guarantee that the brand is always superior to those of competitors. Research has indicated that in order to create a strong emotional attachment between the brand and the consumer, it is important that the brand should always exceed the expectations of the customer and that he/she should believe that no other brand compares to it (Grisaffe and Nguyen, 2011). Consumers are often emotionally attached to a brand, because they believe the brand represents good quality products (Japutra et al., 2014). When consumers speak about the brands they love, they often mention a brand's exceptional performance, trustworthiness, attractive design and the fact that it is considered to be the best available option (Batra et al., 2012). If a consumer believes that he/she can rely on a brand and the brand is perceived as honest and reliable, it will also facilitate the development of emotional feelings towards the brand (Albert and Merunka, 2013). If there is strong emotional connection between a brand and a consumer, the brand would also be considered a source of expertise and advice (Batra et al., 2012).

3.7.3.1 Connecting brand benefits and emotional feelings

Another way to associate an emotional feeling with a brand is for a specific emotional feeling to be connected to the brand by means of a type of brand benefit, for example the attributes of "cosiness" and "togetherness" that are associated with Douwe Egberts or the attribute of "sensuality" that is associated with Haagen Dazs (Franzen and Bouwman, 2001:228). "Nostalgia" is also typically associated with Kodak and "love" with the McDonald's brand (Rossiter and Bellman, 2012). A brand will typically link

an emotion to their brand that is in some way already connected to the product. For example, brands of ice cream or beer will focus on the emotions of fun and pleasure since these can already be associated with the product in a logical way (Franzen and Bouwman, 2001:228). An emotional connection between the consumer and the brand can also be created by providing the brand with a sense of authenticity from its origins and history, creating a brand community, such as Harley Davidson, or having a brand presence at an emotionally meaningful event, such as a musical event (Batra et al., 2012).

Consumers are also more likely to be emotionally attached to a brand if the brand appeals to a deeper desire of the consumer. Brands have the ability to appeal to consumers' desire to be independent, connect with others or fulfil a sense of competence (Japutra et al., 2014). The design and selection of the traits of brands should consider the most significant desires of consumers since they will be more likely to actually generate a brand attachment (Grisaffe and Nguyen, 2011).

3.7.3.2 Using advertising to generate emotional feelings

Advertising is often used to create positive emotional feelings towards a brand. Sometimes, the emotional feelings that a consumer has towards a specific brand is based more on the fact that the consumer has been exposed to the brand multiple times and there is a sense of familiarity that generates positive feelings. Repeated exposure can increase an audience's positive attitude towards an offering (O'Shaughnessy and O'Shaughnessy, 2003:229). Research has also indicated that consumers can become strongly attached to a brand because of the experiences that they have had with the brand (Japutra et al., 2014). In other words, the more familiar consumers are with a brand, the more likely they would be to have a strong emotional attachment with the brand.

Emotions can also be used in marketing to evoke attention and this is known as the tactical use of emotions (Franzen and Bouwman, 2001:228). In this situation the brand will evoke an affective response which is not necessarily a specific emotion; consumers will only experience the brand as being either pleasant or unpleasant (Franzen and Bouwman, 2001:228). There are some who consider that affective responses are not the same as emotions. However, since one of the key foundations of the neurophysiological research methods used in this study is based on the idea of observing positive and negative emotional reactions, the affective response will be considered as a type of emotional reaction. The tactical use of emotions is typically related to the communication of the brand and not the brand itself (Franzen and Bouwman, 2001:228). Pleasant or unpleasant feelings will therefore be used in advertising and strategically evoked in the consumer to emphasise a specific message of the brand. For example, unpleasant or negative emotions are often used in a tactical way in campaigns intended to promote awareness for the risks associated with "drinking and driving".

3.7.3.3 Brand elements and emotional feelings

Pleasant or unpleasant emotions could also be associated with certain brand elements, such as the sonic logo of a brand. The concept of brand experience emphasises the idea that brand elements have the ability to trigger certain emotional feelings. Brand experiences are defined as the subjective, internal consumer responses, such as sensations, feelings and cognitions, as well the behavioural responses evoked by brand-related stimuli that are part of a brand's design, identity, packaging, communications and environments (Brakus, Schmitt and Zarantonelle, 2009). Brand experiences can vary in strength and intensity and valence (Brakus et al., 2009). In other words, some brand experiences are stronger than others and they can be either positive or negative. Some brand experiences occur spontaneously and briefly without much thought by the consumer, while others occur more consciously and tend to last longer (Brakus et al., 2009). The key difference between the concepts of brand attachment and brand experience is that brand experience is not an emotional relationship concept, but rather the sensations, feelings, cognitions and behavioural responses evoked by brand-related stimuli (Brakus et al., 2009). Over time, a brand experience may develop into an emotional bond between the consumer and the brand (Brakus et al., 2009). A brand experience does not occur only after consumption, but rather during any direct or indirect interaction with the brand (Brakus et al., 2009). Brand experience is divided into four different dimensions: sensory, affective, intellectual and behavioural (Brakus et al., 2009). Since the focus of this study is to gain a more significant understanding about how the sonic logo of a brand is processed by the consumer on a subconscious emotional level, it will be considering the dimensions of both sensory and affective.

When discussing emotions in branding, it is important to consider that, in order for a brand to have maximum impact, every part of the brand should be positively appraised by the consumer (Franzen and Bouwman, 2001:228). Appraisal is defined as the process whereby the personal significance of an event, action or attributes is related to a consumer's personal values (O'Shaughnessy and O'Shaughnessy, 2003:63). If the appraisal is positive, the emotions attached to the offering will also be positive (Franzen and Bouwman, 2001:228). Although appraisal is a form of evaluation, it is not necessarily a conscious process and consumers might only be aware of a particular "gut" reaction that they are having in response to a stimulus (O'Shaughnessy and O'Shaughnessy, 2003:63). The fact that the appraisal process in terms of brands is often a subconscious process justifies the use of neurophysiological research methods that allows one to observe positive and negative appraisals that the consumers are unaware of.

3.7.4 Factors that influence emotional feelings connected to brands

One of the factors that can influence emotional branding is a brand personality that is based on the idea of self-congruence. It is important to note that a consumer can realise self-congruence by selecting a brand with a personality that is similar to his/her actual or ideal self (Malär et al., 2011). A brand that is focused on the actual self will reflect who the consumer actually is and an ideal self-brand will reflect the person the consumer would like to be (Malär et al., 2011). Consumers can become attached to a specific brand because it gives them a sense of identity (Japutra et al., 2014).

As mentioned earlier, the personality of a brand can reflect either the consumer's actual self or ideal self (Malär et al., 2011). In the past, cosmetic companies have typically communicated to consumers that using their products will make them more beautiful and assist them in realising and their ideal self (Malär et al., 2011). Consumers can become attached to a brand because of the aspiration of who they would like to be known as (Japutra et al., 2014). Recently, however, Dove has started to focus their brand personality on the actual self by using models who are more average in appearance (Malär et al., 2011) and communicating to their consumers that they should not try to change themselves. This approach has worked well with many consumers and established a strong emotional connection between the consumer and the brand (Malär et al., 2011). There should also be a fit between the brand and a consumer's personality or values and identification with the typical brand customers, opinion leaders or influential customers (Albert and Merunka, 2013).

The study by Malär et al. (2011) suggests that consumers are more likely to form a strong emotional connection with a brand who acknowledges who they actually are, rather than with a brand who promises to assist them in realising the ideal version of themselves. The sound elements that are selected by a brand can assist in developing a specific personality for the brand. It is important to consider whether it would be best for the brand to select music that would reflect who the consumer currently is or who he/she aspires to be.

Another important factor to consider with emotional branding is the degree of product involvement. Research has indicated that product involvement is an important moderator between self-congruence and brand attachment (Malär et al., 2011). If product involvement is high and the brand is personally relevant to the consumer, the consumer will be focused on the similarities between the brand and his or her actual self and whether they match; the consumer's actual self will be confirmed and he/she will feel a strong connection with the brand which will lead to a significant emotional brand attachment (Malär et al., 2011). In contrast, if involvement is low, consumers are typically less willing to take the time to compare their traits with the brand, because the product is not considered to be important enough (Malär

et al., 2011). They are, however, willing to emotionally connect with ideal self-congruent brands (Malär et al., 2011). It is, therefore important to consider the consumer's level of involvement with the product when making a decision about what the personality of the brand will be and which means will be used to establish an emotional connection between the consumer and the brand.

3.8 SENSORY BRANDING

There are different forms of branding that can be utilised by a marketer to create a unique image for a brand. Sensory branding is an area that has received a lot of attention in recent times. Marketers today are using scent, sound and material texture strategically in customer experiences to build strong connections between the brand and consumers (Farhana, 2012). In the U.S., many food manufactures are highlighting how their products appeal to the consumer's different senses (Krishna, 2012). Sensory triggers are effective and inexpensive ways to strengthen a consumer's relationship with a brand, improve the image of a retail store and increase sales revenue (Hultén, 2012).

3.8.1 Definition of sensory branding

There is more than one definition for sensory branding. Sinha (2008) suggests that sensory branding is "the purposeful design and deployment of the interaction between the senses in order to stimulate a consumer's relationship with a brand and to foster a lasting emotional connection that optimises purchasing and brand loyalty". Sensory branding is a multi-sensory brand experience that encourages individual value creation and refers to how the consumer responds when an organisation interacts and supports the purchase and consumption process with the involvement of all five senses in producing customer value, experiences and the brand's image (Hultén, 2011). In the past, the sense of sight has been dominant in creating a specific image for a brand or a store. In the sense of marketing, touch refers to obtaining information about a product and its characteristics, such as its form, weight, hardness and texture. In the retail environment the olfactory aspects refer to the strategic application of pleasant scents (Hultén, 2012).

When studying the influence of different senses in a brand's strategy, it is important to understand the difference between sensation and perception as stages of processing of the sensation. A sensation is when a stimulus affects the receptor cells of a sensory organ, it is biochemical and neurological in nature and perception is an awareness or understanding of the sensory information (Krishna, 2012).

3.8.2 Importance of sensory branding

The reality is that consumers receive all information from the outside world through their senses. Consumers perceive the world with all their senses at the same time, so if an experience is more sensory, it will be more engaging (Soars, 2012). Each of the five senses functions as a specialised receptor in conveying information about the environment, such as optical impressions (vision), acoustics (hearing), olfactory (sense of smell), and taste and tactile sensations or touch (Zurawicki, 2010:12). It is well known that senses are the basis of human physiology (Soars, 2012).

The human brain will interpret sensory information it receives and then produce an appropriate chemical response which will be then translated into thoughts and behaviours (Zurawicki, 2010:12). The mind of the consumer is filled with experiences, emotions and memories which can be triggered and converted into specific behaviour (Soars, 2012).

The use of sensory branding has been utilised mostly in the retail environment. Sensory stimuli have the ability to influence consumers at a subconscious level, impact their perceptions of an environment, improve the shopping experience and may alter behaviour (Soars, 2012). If the correct sensory stimuli are utilised in branding, they have the ability to relax or energise the consumer, improve his/her mood, influence decision-making and ultimately the decision to buy (Soars, 2012). Research has indicated that although all the senses are important and relevant to marketing, smell is especially highly influential. Scent is known as a powerful trigger of memories (Parsons, 2009). The consumer is more likely to appraise a specific smell as either positive or negative than any other sensory cue (Spence, Puccinelli, Grewal and Roggeren, 2014) and if a consumer was to smell a scent associated with a specific store in another environment it would stimulate them to think about that store.

Sensory triggers are utilised by marketers in a variety of ways. In a recent advertisement by Lindt chocolate they discuss the art of chocolate tasting and instruct the consumer to use all five their senses when tasting chocolate (Krishna, 2012). Store atmospheres that react to shoppers have also been created, such as changing rooms that change the music and ambient scent to match the garment a customer is trying on (Spence et al., 2014).

Some retailers make use of pleasant ambient scents to improve a store environment, encouraging consumers to explore the store more (Doucé, Poels, Jansens and Becker, 2013). Even service providers and retail stores carrying products not possessing a natural scent can use ambient scents (Spangenberg, Grohmann and Sprott, 2006). The influence of ambient scent in a retail environment is moderated by congruity between the scent and the retailer's product offering (Spangenberg et al., 2006). In other words, it would be appropriate for a surf shop to use the smell of the ocean as an ambient scent.

The challenge associated with using ambient scents is that some retailers offer more than one product type and they need to consider the possible negative effects of a pleasant scent that is thematically incongruent with a part of the retailer's offerings (Doucé et al., 2013). An example of this would be if a book store decides to use a chocolate scent. The scent would complement certain product categories very well, such as cooking books or romantic novels, but would not necessarily be appropriate for gardening books or crime novels. Research has indicated that consumers evaluate a store and its offerings more favourably in the presence of an ambient scent that is specifically congruent with gender-based products (Spangenberg et al., 2006).

There are also many upmarket hotel chains that are incorporating signature scents, with the expectation that the scent will assist their customers in recognising other likeable features of the hotel and encourage them to return to the hotel in the future (Krishna, 2012). An example is the Westin hotel chain whose signature scent is white tea with geranium and freesia (Krishna, 2012).

According to Fulberg (2003), the predominant focus of most brand communications has been on the visual senses of the consumer. However, a successful television advertisement uses many different elements and the effectiveness of the advertisement does not solely depend on the quality of the visual images. The value of using sensory branding as a strategic marketing tool has been recognised, but only a few marketers incorporate it successfully. According to Lindstrom (2005b), it is evident that consumers' entire understanding of the world is experienced through their senses and that those senses are linked to memory and can tap into emotion. The senses of a consumer are powerful tools and ought to be utilised strategically in developing a brand. There are some brands that understand the value of appealing to the consumer's senses. For example, a fresh spring day has a specific smell to it; manufacturers have attempted to bottle this feeling of life's renewal and marketers are using the emotional connection associated with spring to sell dishwashing liquids, toilet cleaners, shampoos, soaps and window cleaners (Lindstrom, 2005b).

3.8.3 The advantages of sensory branding

There are many advantages associated with creating a sensory experience for a brand. One of the primary motivations for addressing all of the consumer's senses is that they are exposed to many different advertisements for many brands daily, and that subconscious triggers appealing to the consumer's basic senses may be a more successful technique to appeal to consumers (Krishna, 2012).

According to Yoon and Park (2012), the more sensory the stimuli provided by a product, the greater the product's perceived value will be. Harrods recently ran an exhibition of the senses by turning each of its six lifts into a different sensory experience; in one lift micro lasers directed beams of light on Swarovski

crystals; in another different smells, such as the scent of a new car, were released at the touch of a button and in the “taste” lift customers were given the opportunity to create their own ice-cream flavours (Soars, 2012).

A branding strategy that is based on a consumer’s sensory experience has important implications in a consumer market characterised by individuals’ emotions and experiences (Yoon and Park, 2012).

Strong and consistent brand associations are important requirements for successful branding. According to Fulberg (2013), one of the most important objectives of a brand’s communication mix is to create a set of brand triggers. Brand triggers are defined as “consistent and effective elements of brand communications that stimulate memories of any associated brand experiences” (Fulberg, 2003). There are many organisations that understand the value of positive brand triggers or brand associations and they constantly explore new ways to create them (Fulberg, 2003). From a managerial perspective, sensory marketing can also be utilised to create specific subconscious triggers that could define consumers’ perceptions of abstract ideas of the product, such as its sophistication, quality, elegance, innovativeness, modernity and interactivity (Krishna, 2012). In other words, sensory branding can be used as a tool to communicate the personality of a brand. The sonic logo used by Intel is a good example. The specific notes associated with the sound logo suggest that the brand is modern and cutting-edge. Sensory branding can also be utilised to communicate certain abstract attributes of a product such as its colour, taste, smell or shape (Krishna, 2012).

One of the benefits of utilising sensory marketing is that it engages the senses of the consumer and could affect his/her behaviour, perception and judgment of the brand (Krishna, 2012). The crunch associated with Kellogg’s Cornflakes was apparently developed by testing the crunching of cereals in a Danish sound laboratory in order to improve the product’s “sound quality” and link it to the brand signature (Sinha, 2008). The crunch has established a valuable point of difference, being recognised as the Kellogg’s crunch in 45 percent of cases in which the box of the brand had not been present (Sinha, 2008). The brand attributes generated by sensory triggers are often created by the consumer himself and are often more powerful than those verbally provided by the advertisers (Krishna, 2012).

3.9 SUMMARY

It is evident from the way that marketing has developed in the last thirty years that branding is an important area to consider today. Many organisations that produce consumer goods focus on developing and protecting their brands. It is important for organisations to understand how consumers feel about their brands.

The sonic logo or other audio elements of a brand could be considered as both brand elements and brand associations. Similar to the visual logo of a brand, the sonic logo is carefully selected to suit the identity and image of the brand. If the sonic logo is used continuously in advertising and on other platforms, the sonic logo can also become a strong association of the brand.

This chapter provided some insight into branding and the theories that are relevant to studying sonic logos. The first part of the chapter focused on where the concept of branding comes from, the definition of branding the value of a brand and other brand concepts. The second part of the chapter focused on other types of branding specifically related to sonic branding, such as emotional branding and sensory branding. The following chapter will focus on the concept of sonic branding and the various audio elements that are used by brands.

CHAPTER 4

SONIC BRANDING

4.1 INTRODUCTION

The use of sound is an important factor in sensory branding and has recently been termed sonic branding. Sonic branding is a developing area in the domain of marketing. It is known as the strategic use of sound to create a distinctive auditory identity for a brand (Krishnan et al., 2012) and, in essence, it enables the brand to communicate what its identity is to the consumer via the sense of hearing (Groves, 2012).

Although sound and music have been used in different ways in marketing for many years, the strategic value and the notion that music and sound can be used as a means to distinguish a brand and create a strong brand association has only been recognised recently. For this reason, there is a limited amount of academic research that has focused on the concept of sonic branding and sonic branding elements.

This chapter will focus on the importance and value of music and sound for marketing. It will discuss the concept of sonic branding, the different sonic branding elements and specifically the sonic logo.

4.2 THE PRESENCE OF MUSIC AND SOUND IN MARKETING

Consumers are constantly interacting with music and sound. The presence of music is evident in every culture and it plays a significant role in people's daily lives (Zentner, Grandjean and Scherer, 2008). The ability of an individual to hear ought to be considered imperative in marketing as it supports the basic function of interpersonal communications, the hearing of sounds and the interpretation of speech (Zurawicki, 2010):12.

4.2.1 Influence of music and sound

Sound and music have the ability to immediately alter people's moods or perceptions and generate specific images in their minds (Beckerman and Gray, 2014). It also has the ability to evoke a range of different emotions; from mere arousal and basic emotions such as happiness and sadness to complex emotions such as nostalgia (Juslin et al., 2013). The use of music and sound ought to be considered strategically by marketers as they have the ability to connect with the consumer on an emotional level. The consumer's ability to respond to sound is central to his/her consciousness, as it frames every moment and invisibly triggers powerful memories and emotional reactions (Beckerman and Gray, 2014). In many ways, audio is more compelling than visuals, so it is interesting that only a few brands currently consider the use of audio strategically (Lafferty, 2015).

Consumers are constantly having sonic experiences, even if they are not consciously aware of them or their impact (Beckerman and Gray, 2014). The interactions that consumers have with music and sound can be classified as being either voluntary – such as car radios, home stereos and other portable music devices – or involuntary; for example, in on-hold systems, workplaces, stores, bars, restaurants and other public spaces (Craton and Lantos, 2011). An individual can also judge music or a sound based on the structural elements of the sound. In other words, in the same way that the visual system makes it possible to distinguish between different colours, forms and depths, the auditory system allows an individual to identify different qualities of a specific sound, such as the tone and variations in the voice, as well as the volume or rhythm of the sound (Zurawicki, 2010:12). The use of music in film is a good illustration of how music can communicate or evoke a specific feeling. The soundtrack of a film has the ability to trigger emotions, communicate relationships between characters and create expectations for the outcome of the film (Beckerman and Gray, 2014).

4.2.2 Music and sound in marketing

Hearing is one of the most powerful senses and is capable of evoking strong feelings and memories (Lafferty, 2015). The use of music and sound represents a valuable opportunity for marketers to connect consumers with their brands and use audio strategically to create a positive emotional association with the brand. It also has the ability to communicate a significant amount of information in a short period of time (Beckerman and Gray, 2014).

In the same way that a smell can be connected to the memory of a consumer, sound is connected to mood and it has the ability to create a specific mood and produce feelings and emotions (Lindstrom, 2005a). This characteristic of sound enables it to create strong brand associations that could evoke positive emotions. In order to fulfil a precise strategic function, a sound or piece of music associated with a brand should evoke an emotional feeling or trigger a specific memory (Beckerman and Gray, 2014).

Many marketers attempt to use music and sound well, but fail to effectively distinguish the audio identities of their brands. In order for a brand to be differentiated successfully by means of music or sound, it has to be considered strategically (Beckerman and Gray, 2014). Understanding how music and sound are processed by the consumer and the impact it has enables the marketer to develop and select audio elements that support the identity of the brand.

4.3 PROCESSING OF SOUND

All sounds from the outside are processed in the human ear by means of aerial conduction (Zurawicki, 2010:12). The sound arrives at the middle ear and reaches the eardrum, a membrane that vibrates at

varying speeds; the more severe the sound, the faster the ear drum will vibrate (Zurawicki, 2010). The small bones of the middle ear, also known as the hammer, anvil and the stirrup, amplify the signal from the ear drum and convey it to the inner ear (Zurawicki, 2010:12).

Sound waves have several physical properties that can be distinguished by the human ear and directly influence one's perception of the sound waves (Krishna, 2013:56). The physical properties of sound waves are related to the structural elements of music and sound. The first property is the *amplitude* of the wave. The *amplitude* is the difference between the pressure value of the wave's peaks and troughs and it is measured in decibels (Krishna, 2013:56). It is also perceived as the relative loudness or softness of a specific sound (Krishna, 2013:56). The second property of sound waves is known as *frequency*; a measurement of how many cycles per second the wave goes through (Krishna, 2013:56). The *frequency* of a sound wave is also observed as its pitch, which can range from extremely high to extremely low, based on the spectrum of hearing (Krishna, 2013:56). The third property of sound that is considered important is related to its harmonics and is known as the *timbre* of a sound (Krishna, 2013:56). *Timbre* allows one to differentiate between sounds that have the same loudness and pitch; the best example is to play the same note on two different musical instruments and then compare the two sounds (Krishna, 2013:56). The structural elements of sound, such as the tempo, volume and pitch influence how a piece of music is received by the listener.

Music and sound have significant functions in everyday life and are tools that can be used strategically to connect with the consumer.

4.4 SONIC BRANDING

There are different terms used in both industry and academic literature to refer to the concept of using music or sound strategically in marketing. Some terms tend to only focus on the use of specific elements, while others address the use of audio in general.

Audio-marketing focuses on the use of music in retail environments. It is defined as the use of music to create an atmosphere and to influence consumers in places of sale (Makomaska, 2011). The term sonic branding is typically used when discussing the strategic use of music and sound in general.

4.4.1 Understanding and defining sonic branding

Krishnan et al. (2012) define sonic branding as the strategic use of sound to create a distinctive auditory identity for a brand. Essentially, sonic branding enables the brand to communicate what its identity is via the sense of hearing (Groves, 2012). Generally, the idea of sonic branding is to utilise sound and music more consciously and to strategically create a link between the consumer and the brand and to not only

use music to support a television advertisement or a campaign (Groves, 2012). Often the music utilised for a specific advertisement is only considered in the final process of the advertisement's development. However, sound in its various forms can play a central role in branding (Krishnan et al., 2012) and should therefore be managed strategically. Effective sonic branding requires creating and facilitating sonic triggers that disrupt expected patterns, attract the consumer's attention and use the attention to remind the consumer of positive experiences with the brand (Beckerman and Gray, 2014).

As sound and music can significantly influence the consumer's experience of a brand, the process of creating or selecting audio elements for a brand ought to be a systematic process. Sonic branding should address the fact that the development of a sonic logo ought to be systematic and, therefore, the definition that is most suitable is that sonic branding is a "structured process of developing, implementing and managing the sound and music that a brand uses for its communications in the form of a brand sound identity" (Groves, 2012).

Associating a brand with a specific sound or piece of music has the ability to create a unique identity for the brand in the minds of consumers. Understanding the benefits that can be realised by means of sonic branding extends the knowledge on what sonic logos could potentially offer to marketers.

4.4.2 The importance and value of sonic branding

Music and sound are important elements in marketing. Updated and brand-congruent auditory elements are considered essential elements of the marketing mix and relevant to all types of firms (Lafferty, 2015).

Music and sound can have a particularly powerful influence. One of the key reasons why music is considered to be important in marketing is that it is often attached to memories and emotions felt by an individual during specific life episodes, and even when heard many years after the original event, the music has the ability to unleash those memories or emotions (Oakes et al., 2013). With the role of music in marketing, it is important to consider that responses to auditory stimuli can be triggered either consciously or subconsciously (Wiedmann, Hennings, Klarmann and Behren, 2013).

In the past, the music and sound choices of many marketers and agencies developing advertisements were random, often dependent on the financial resources available and rarely associated with the identity of the brand (Brodsky, 2010). However, music and sound are highly influential and have the ability to influence consumers' perceptions of the brand. There are a number of different sonic branding elements that can be utilised by marketers to benefit their brands.

4.4.3 Different types of sonic branding elements

Although the purpose of this study is to investigate what the influence of a sonic logo is on the consumer, the audio identity of a brand is not limited to only the sonic logo. There are many brands that utilise other audio elements – such as songs, jingles or a particular sound – to create a strong and unique association with the brand (Groves, 2012). Understanding the impact of all forms of audio elements will increase our understanding of sound in marketing and as a result, the value of sonic logos will also be better understood.

The use of sonic logos is an area that has not often been adequately considered in academic research and therefore research on other sonic branding elements can assist in creating a better understanding of how music and sound are processed by the consumer and why it should be a strategic consideration in marketing. There are also a number of structural similarities between other sonic branding elements and sonic logos and research on these elements can provide information on how sonic logos ought to be used and studied in the future.

4.4.3.1 On-hold systems

Music and voice-over recordings are audio elements that are often used in an organisation's on-hold system. Although only certain consumers will communicate with a company telephonically, it is still an important representation of the brand's identity. Sound is influential and it is necessary to select a suitable combination of voice and music to be played when a member of staff cannot take a phone call immediately (Lafferty, 2015).

When selecting a voice and music for the on-hold system, the current image of a brand should be taken into consideration and a selection should be made accordingly (Lafferty, 2015). A masculine voice is typically considered authoritative and professional, while a feminine voice is considered soft, soothing and welcoming (Lafferty, 2015). The voice selected ought to be a good fit for the brand. Age can also influence consumer's perception of a voice-over. Older voices are typically considered to be more authoritative and knowledgeable (Lafferty, 2015). Voice tone can also vary from corporate to a casual or conversational style (Lafferty, 2015). A regional accent can also reinforce the identity of an organisation that might have a strong presence in a particular geographical area (Lafferty, 2015).

The music selected for a voice-over can also be a complicated decision. Often companies choose to simply use popular music, but this is not the best choice. Firstly, it requires the music to convey a message which was never intended and, secondly, the consumer might already have positive or negative

feelings associated with the specific song (Lafferty, 2015). Consequently, a piece of popular music may elicit negative feelings in certain consumers, even if it seems cheery and upbeat.

Using the right combination of voice and music for an on-hold system has a powerful impact on the subconscious of the consumer and it can influence his/her perception of a brand (Lafferty, 2015).

4.4.3.2 Voice-overs

The voice-over selected for an advertisement can have a significant impact on the meaning of the advertisement, especially in radio advertising where there are no visuals that can assist in communicating the message of the advertisement. However, most advertising agencies and production studios use intuition to select a voice for an advertisement whose gender, apparent age, ethnic inflection and delivery style is a good fit for the product and the advertising message as there are only limited guidelines available (Chattopadhyay, Dahl, Ritchie and Shanin, 2003).

The voice is considered to be the fundamental component upon which the semantic and formal meaning of the message of the advertisement relies (Rodero, Larrea and Vazques, 2013). The effectiveness of an advertisement is known to be significantly related to the voice-over's voice, as a significant part of the advertisement's message reaches the consumer by means of voice (Medrado, Ferreira and Behlau, 2005). An attractive voice may result in more favourable responses from the listeners and lead to the development of positive attitudes (Chattopadhyay et al., 2003). French accents and husky female voices have the ability to make cosmetics or perfumes appear sexier and more attractive to the consumer (Krishna, 2012).

Style and gender of voice-over

The speech style of the voice-over also provides information about the individual. When an individual speaks in a direct manner with little variation or hesitation in the voice, it gives the impression of reliability and expertise compared to a voice with less confidence (Lalwani, Lwin and Li, 2005). The images of certain products and brands, such as insurance or investment services, are strongly focused on the ideas of reliability and trust and therefore it is important for them to use a style of voice-over that is associated with those qualities.

There has also been some discussion on whether it is better to use a male or female voice for a voice-over. Although mostly male voices are used for radio advertising, research has indicated that they are in fact not superior in terms of effectiveness and adequacy or capacity to attract attention or encourage recall (Rodero et al., 2013). Typically, a voice that is congruent with the image of the brand is selected. Male voices are therefore considered more suitable for traditionally masculine products and female voices for

feminine products (Rodero et al., 2013). However, research has indicated that the assessment of the voice-over of an advertisement can often differ, depending on the gender of the individual exposed to it. Men tend to prefer a female voice, which they generally consider to be more effective, pleasant, clearer and receptive; women value a male voice more as they consider it more pleasant, persuasive and authoritative (Rodero et al., 2013).

Accent of voice-over

The accent of a voice and its influence should also be considered when selecting a voice for an advertisement. An accent could be an indication of a speaker's social status, such as a plumber who might have a strong urban regional dialect that identifies him as someone of a lower status or an object of humour (Lalwani et al., 2005). The consumers' liking or preference for a specific accent, their understanding of the accent and whether they will remember the advertisement should be considered by the marketer (Morales, Scott and Yorkston, 2012). Accents are sometimes used to communicate specific information about the image of the brand to the consumer. Certain accents of English, such as Standard British English, is often used to signify the prestige of a specific product, while colloquial language is used more for everyday products (Lalwani et al., 2005).

The selection of the voice is particularly important if it is a standard campaign that has to be utilised in more than one market (Lalwani et al., 2005). The marketer ought to consider how individuals in each of the markets will respond to the voice used in the advertisement.

It is evident that the voice selected for a voice-over is an important consideration and should be considered strategically; it is therefore aligned with the image of the brand and the message of a specific advertisement. Likewise, the sonic logo of a brand should be a good fit for the brand, encourage brand recall and be suitable for use in global markets.

4.4.3.3 Ambient music

Music played in retail stores is considered a key element of sonic branding as it has the ability to influence a consumer's shopping experience, as well as his/her perception of the retail brand. In-store music is typically referred to as ambient music.

A significant amount of academic research has focused on the subject of ambient music and sounds. It is evident that music contributes to the aesthetics, can be used to create more attractive shopping environments for the consumer and elicit positive or negative memories in the consumer (Oakes et al., 2013). It also influences the consumer's loyalty towards the store (Walsh, Shiu, Hassan, Michaelidon and Beatty, 2011).

The influence of music in retail

The choice of music in a retail environment can have a significant influence on shoppers' experiences of a retail store. The music selected for a store should be meaningful rather than a mere background sound, as it has the ability to send mixed signals to customers about the store's brand if it is not suitable (Morrison and Beverland, 2003).

Past research confirms that if retailers want to create an enhanced sensory experience for their shoppers and influence sales, music selection ought to be based on customer research rather than the personal taste of employees (Vida, Obadia and Kunz, 2007). As there are some risks in selecting the right music that will evoke a positive response in the consumer, research has also considered the idea of not using any music in a retail environment. However, if music is expected but not present, the ambient environment will lack relevance and consumers will more than likely avoid the store due to the incongruous absence of music (Oakes et al., 2013). Therefore, a decision to eliminate ambient music is not neutral and it will not be without risk in terms of the impact upon affective and cognitive responses of the consumer (Oakes et al., 2013).

Structural elements of retail music

Certain structural elements of music play an important role in the behaviour of consumers in a store. Slower tempo, lower volume and familiar music encourage customers to spend more time in the store than when the tempo or volume are high and the music is not familiar (Garlin and Owen, 2006). The structural elements of music also interact with one another and together influence the consumers' perceptions of the retail environment. Research indicates that the effect of a slow tempo of music depends on the mode of the music; specifically, only minor mode, slow tempo music positively influences sales volume (Knoferle, Spangenberg, Hermann and Landwehr, 2012). Music volume also has a significant influence on consumers' perceptions of a retail environment. Music that is too soft tends to force consumers to interact with sales staff, whereas music that is too loud intrudes on the overall experience (Beverland, Lim, Morrison and Terzioski, 2006). The music can also "perform" specific functions in-store. For example, if the store is very busy and the idea is to move consumers through the store in a timely fashion, playing an upbeat soundtrack could encourage them to move faster through the store. Music can influence the consumers' moods, the actual time spent in the location, their perception of the time spent and the monetary spending (Krishna, 2012; Gobe, 2001:75).

Music likability and fit

If the ambient music is liked, it also tends to increase the amount of time spent in-store by the customer (Oakes and North, 2008). Earlier research indicates that if shoppers like the music and the perceived music is a good fit with the image of the store, it positively affects the length of shopping time and, therefore, indirectly influences consumers' monetary expenditure (Vida et al., 2007). Understanding the impact of music in the retail environment and how it can be used strategically to encourage desired consumer behaviour will increase the knowledge on the role of music in marketing and branding and how it can be used more effectively.

Music has the ability to differentiate a brand and encourage consumers to identify with the image of the store. When music played in-store is suitable for a brand and well-liked by the consumers, the shopping experience reinforces the positive feelings towards the brand. For example, Abercrombie and Fitch carefully select music to appeal to the tastes of their consumers (Gobe, 2001:75).

The fit of the music is another factor that should be considered when selecting ambient music for a specific retail environment. Music should be suitable for the image of the retailer, appeal to the target market and should integrate well with other elements in the store environment. Perceived fit of music has the ability to lengthen shopping time (Vida et al., 2007). A high level of congruity between the musical genre and the retail environment is also likely to increase consumers' willingness to pay higher prices and buy more expensive brands (Oakes and North, 2008). Previous research indicates that for existing customers, musical fit results in brand reinforcement and strengthens the brand relationship; for new customers, the music is a significant cue of the brand's positioning (Beverland et al., 2006). Stores that carry multiple product lines often zone music to reflect and fit the specific brand's image, rather than playing general music in the store (Morrison and Beverland, 2003). This strategy is particularly suitable for stores that appeal to a range of different target markets, as music can be also be selected to reflect the preferences of the target market that will shop in the specific zone.

There are also risks associated when using ambient music that is not a good fit for the retail environment. Music that does not fit well could lead to reduced time spent in-store or even store avoidance (Beverland et al., 2006). There is also an interaction between the different senses that can be utilised strategically to communicate a specific brand. Research indicates that consistency between ambient scent and music in a retail store positively influences behavioural intentions and evaluations of the store, its merchandise and the store environment (Spangenberg et al., 2005).

Retail music and mood

Music has the ability to create a specific atmosphere and this could influence both the mood and emotional feelings of the consumer in a store. Research suggests that emotions play an important role in creating and mediating a specific experience in a retail environment (Walsh et al., 2011). The presence of music in a retail environment has been known to have a positive influence on the mood of the consumer (Garlin and Owen, 2006).

It is evident that music is an important factor to consider in the retail environment. Retailers and brand managers who use music as part of their brand strategy should consider it strategically and identify a suitable sound that complements other atmospheric stimuli (Vida et al., 2007) which successfully represents their brand, store and target market (Morrison and Beverland, 2003). Similarly, it is essential to consider the use of a sonic logo strategically. A sonic logo should complement the image of the brand, appeal to the target market and facilitate an emotional association between the consumer and the brand.

4.4.3.4 Advertising music

The use of music and sound plays an important role in advertising and has been considered in academic research for many years (Stewart, Farmer and Stannard, 1990). A number of the factors that have been considered in research on advertising music provide guidance on what ought to be considered when exploring the concept of sonic branding and the sonic logo element.

Musical fit

Past research on advertising music has focused primarily on the concept of musical fit. Musical fit is defined as the process by which customers associate a certain piece of music with particular products (Yeoh and North, 2010). Research has indicated that music congruity is important (Oakes and North, 2008). Similarly, the sonic logo selected for a brand should be a good fit for the product and for personality of the brand.

Function of advertising music

Music has multiple functions in advertising. It is used to attract attention, to carry the message of the product or the brand, to act as a mnemonic and device or create a state of excitement or relaxation (Alexomanolaki, Loveday and Kennet, 2007). Music also has the ability to influence the mood and behaviour of the consumer. The classical conditioning theory suggests that listening to liked or disliked music while exposed to a specific product will affect the consumer's product preferences (Gorn, 1982).

Music can also enable the consumer to recall the content of an advertisement or the brand featured in the advertisement (Alexomanolaki et al., 2007) and plays an essential role in telling a specific story or communicating a specific message. Music can provide emotional meaning for an advertisement. Music is considered to be a powerful stimulus in general and is capable of inducing a range of different emotions (Nater, Abruzzese, Krebs and Ehlert, 2006).

Male and female responses toward advertising music

Although differences may exist between the emotional responses of different gender groups, these have not often been considered previously when studying audio stimuli in marketing and should be considered, specifically with regard to advertising music and sonic logos, as these elements can be used strategically to appeal to a specific gender group.

Research into music psychology has indicated that emotions evoked by music are typically accompanied by specific physiological response patterns. However, the reactions of males and females are not the same; females typically have a stronger response than males towards an arousing and unpleasant musical stimulus (Nater et al., 2006).

4.4.4 Sonic logos

The sonic logo – also sometimes referred to as a sound or audio logo – is a signature sound such as a small piece of music or a sound that communicates to the consumer who the brand is (Groves, 2012). Examples of well-known sonic logos include the 5-tone Intel logo, the 4-tone start-up chime of Windows Vista and the 3-tone NBC logo (Krishnan et al., 2012).

4.4.4.1 Definition of a sonic logo

Sonic logos can be defined as acoustic signals of very short duration which may be naturally sampled sounds – vocal or external; instrumental or a sung melody – or synthetic sound effects (Bonde and Hansen, 2013). An example of an instrumental melody would be the sonic logos associated with Samsung and LG. The classic roar associated with Metro Goldwyn Mayer and the swoosh sound of Skype are examples of sampled and synthetic sounds, respectively (Bonde and Hansen, 2013).

4.4.4.2 Purpose of the sonic logo

Although there are a number of brands that use sonic logos as brand elements, the use and value of these logos have not previously been considered in academic research, limiting our understanding of the value of sonic logos.

The sonic logo is sometimes perceived as the auditory counterpart of the visual logo of the brand and it performs a similar task to the visual logo of the brand (Krishnan et al., 2012). The sonic logo is also considered an audible memory trigger associated with the brand (Groves, 2012). The idea is that when a consumer is exposed to the sonic logo, he/she will recall the brand associated with the sonic logo. In addition, the sound of the sonic logo will evoke other brand associations, such as the consumer's personal experiences with the brand and the communication of the brand.

4.4.4.3 Creating a sonic logo

Recommendations in terms of how a sonic logo ought to be selected or created for a brand are restricted. There are only a few authors who have made suggestions on how a sonic logo should be created and managed by a brand. At this stage, there is no globally-accepted method for selecting the music of a brand and no globally-accepted method to measure the usefulness of music for a brand (Jackson et al., 2013:7). Groves (2012) suggests that the auditory elements of a brand's identity should be managed with the same attention and meticulousness that is given to the brand's visual elements. Therefore, audio elements, such as sonic logos, should be used in the same way that the visual elements of a brand are used consistently and continuously across various touch points.

Music is selected in many different ways. Senior brand managers, retail operators, visual merchandising managers, agency creative directors, advertising directors, music supervisors and ad producers are all often involved in the process (Jackson et al., 2013:7). It would be better if music choices were made with the final consumer in mind, because if the right music is selected, it has the ability to connect on an emotional level with the audience (Jackson et al., 2013:7). If it is affordable, it would also be a good idea to associate a brand with music that is popular with the consumer (Jackson et al., 2013:7). There are, however, some risks associated with selecting popular music for a brand. These risks include cost, lack of controlled licensing and the possibility that the song will not be explicitly linked to the brand if it is being heard on other platforms (Jackson et al., 2013:7).

Because there is a limited amount of research and information available on the subject of sonic branding, there are very few guidelines as to how an organisation ought to select and develop a sonic logo. There are, however, some properties that have been identified as important for the successful use of a sonic logo.

4.4.4.4 Properties of a good sonic logo

In order to understand the true value of a sonic logo and how it ought to be selected, it is important to know what actually defines an effective sonic logo. Even though there is limited information available on

the subject of sonic branding, Groves (2012) suggested a set of criteria that can be used to judge the effectiveness or aid in the development of a new sonic logo. Others have made suggestions on what should be considered important for brand elements in general and what, therefore, is also relevant to the study of sonic logos. The importance of brand fit, transferability and likability are discussed.

Brand fit

The sonic logo should match the image of the brand. Research indicates that a brand element should be a good fit for a brand and convey descriptive or persuasive content about the brand (Farhana, 2012).

The meaning of a brand element can be categorised in two different dimensions. The first is that it is related to general information about the nature of the product category (Keller, 2003:176); in other words, whether the brand element is consistent with what a consumer actually expects from the specific product category. The second is that it is related to specific information about particular attributes and benefits of the brand (Keller, 2003:176).

Farhana (2012) also suggests that the visual logo of a brand can be meaningful in the sense that it could successfully identify the brand and differentiate it from competition. It can also symbolise what the brand is and the traits it represents. Brand elements should be selected so that their distinctive meaning enhances the formation of brand associations (Keller, 2003:176). Similarly, the sonic logo should be used as a way to differentiate the brand from its competition and communicate to the consumer whom the brand is.

The sonic logo also has the potential to act as a point of connection with customers by communicating the brand's core values (Park et al., 2013). Both sound and music are powerful elements that can be used to evoke specific feelings in the consumer and emphasise exactly who the brand is and what it represents.

According to Hynes (2009), a visual logo adds value by being seen and recognised by stakeholders, but it is only considered truly effective if it is a signature of the organisation and there is a clear link between the shape, colour and other design elements of the visual logo and the organisation it represents. Likewise, a sonic logo should be both memorable and recognisable and the sound of the sonic logo should suit the brand well. If the sonic logo is a good fit for the brand, the consumer will be more likely to recognise it in the future and recall the specific brand associated with it (Groves, 2012).

Distinctive and relevant packaging is also a brand element that can play a significant and meaningful role as it enables the brand to get close to the consumer and therefore it has the ability to create an identity, represent brand equity and ultimately influence the consumer's decision (Farhana, 2012). There are also opportunities for a sonic logo to interact closely with the consumer. An example of bringing the sonic

logo closer to the consumer would be to incorporate it into the design of the product, such as the sonic logo that is used as a start-up tone by Samsung.

If a sonic logo is easily recognisable, but it does not represent the symbolic and the functional benefits of the brand, the brand has failed to take advantage of a significant opportunity. Research indicates that over time the visual logo of a brand has the ability to be directly equated to the specific brand, and even if the logo is viewed from a distance, it will be linked to what the brand represents (Farhana, 2012). If a meaningful sonic logo is used strategically for a significant period of time, it also has the ability to be directly associated with the brand and when the consumer hears the sonic logo he/she will be reminded of the brand even if the brand name is not available.

The sonic logo selected should be a good fit for the brand and should also be meaningful. Many of the sonic logos associated with electronic brands communicate that the brand is modern and represents cutting-edge technology.

Transferability

A brand element should be transferable in both a product category and a geographic sense (Keller, 2003:177). Brand elements should be transferable in such a way that they can be used for more than one product, product line, market segments, geographic boundaries, markets and cultures (Farhana, 2012).

The visual logo of a brand can often transcend geographical boundaries and language barriers because of its universal graphics language (Dass, Kohli, Kumar and Thomas, 2014). Generally, a sonic logo is able to transfer well and can communicate a significant amount of information about the image of a brand. It also does not have any restrictions in terms of geographic boundaries if the sonic logo does not have any lyrics in a specific language. It is, however, important to ensure that the sound of a sonic logo will be appealing to consumers from different target markets.

Culture differences can sometimes be a significant hindrance when developing international brands and attempting to communicate with global consumers. When entering a new country, it is important to first investigate their perception of the brand's existing identity. Research indicated that Korean taglines and brand logos were more symbolic and abstract than those from the US and it was better to develop a localised corporate identity for each country (Jun and Lee, 2007).

In some situations, cultural differences do not require the brand to modify brand elements. A study by Pittard, Ewing and Jevons (2007) indicated that culture had no significant impact on consumers' preference of design elements of visual logos and that the divine proportion and natural logos were universal in their appeal. It is evident that with certain brand elements it is possible to cross cultural

barriers and utilise the same approach in different markets. Since music is often processed at a subconscious level, it should be possible to identify a sonic logo sound that has the ability to be used in different parts of the world without modification.

A brand should be consistent in how the sonic logo is used across more than one platform. Consistency in marketing refers to the sharing of common brand meaning and content among several means of communication (Delgado-Ballester, Navarro and Sicilia, 2012). Campaign elements should represent one clearly distinguishable brand experience (Van Praet, 2012:145) and a brand should be consistent in all its applications and touch points (Groves, 2012:76).

Consumers tend to gravitate toward what is familiar; the more an organisation varies their branding elements from advertising to point of purchase, the more social distance will be created between the consumer and the brand (Van Praet, 2012:145). Using a slogan and packaging and promotional material in advertising ensures that the slogan is memorable and the association between the brand and the slogan is strong (Kohli, Leuthesser and Suri, 2007). A sonic logo should also be used on every platform possible. The sonic logo of a brand can be used in advertising, on websites, as a ringtone or message tone for cellular phones or as part of the on-hold system used by an organisation.

Likability

It is important to select a sonic logo that would be aesthetically appealing to the consumer. According to Park et al. (2013), aesthetically appealing visual logos can provide visual pleasure and prompt consumers to develop emotional bonds with the brand.

A sonic logo should be pleasurable for the consumer to hear. If the consumer finds the sonic logo of a brand irritating, he/she will dislike and avoid the advertising of the brand. These negative feelings towards the audio could also influence the consumer's general feelings towards the brand.

Research indicates that the likability of a slogan is often dependent on the clarity of the message, the articulation of the benefits, rhymes and creativity (Dass et al., 2014). Creativity is also an important factor to consider when developing a sonic logo. If a brand uses a sonic logo that is creative and different, consumers are more likely to notice it and to find it aesthetically appealing.

In order to have an affectively pleasing visual logo, a moderately elaborate design should be selected, since it will be more likely to maintain the consumer's interest and liking over multiple exposures (Henderson and Cote, 1998). The same principle should be used when selecting a sonic logo for a brand. If a sonic logo is too simple, it will not be memorable enough and the consumer's interest will waiver after being exposed to it a few times.

Because music has the ability to be strongly linked to certain emotions and memories, it is important that the sonic logo triggers a positive emotional response when it is heard (Oakes et al., 2013). Positive affective reactions are critical to the success of a brand's visual logo and that the positive affect can be transferred from the visual logo to the product (Henderson and Cote, 1998). Similarly, affective reactions towards the sonic logo of the brand could also be transferred to the product and influence the overall feeling towards the brand. Many organisations attempt to evoke emotions in consumers and to link the emotional feelings to the brand in such a way that it can be used for a global brand and sustained in more than one market (Pittard et al., 2007).

According to Groves (2012), a sonic logo that is well-designed actually requires very little or no involvement from the consumer to be perceived as intended. In other words, the consumer does not necessarily have to be consciously aware of the sonic logo or focused on it for it to create a successful association with the brand involved.

According to Keller (2003:177), although a brand element can be rich in visual and verbal imagery and inherently entertaining and stimulating, the associations suggested by the brand element is sometimes not as strongly related to the actual product. Ideally, a sonic logo should be both aesthetically appealing and strongly related to the image of the brand and the product.

4.5 SUMMARY

Sound and music have been used in different ways in marketing for many years, but the strategic value of this and the notion that music and sound can be used as a means to distinguish a brand and create a strong brand association has only been recognised recently. Empirical research on the subjects of sonic branding and sonic branding elements is necessary to gain a better understanding of the value of using audio stimuli in marketing.

This chapter focused on the importance and value of music and sound for marketing. It discussed the concept of sonic branding and the different sonic branding elements. Insights from the areas of ambient and advertising music were discussed to provide a theoretical basis for the study of sonic logos. The concept of the sonic logo was also discussed.

The sonic logo, as well as other audio elements associated with a brand, is not necessarily processed by the consumer at a conscious level. It is, therefore, important to understand the influence of elements that are processed at a subconscious level. The next chapter discusses the different levels of consciousness and how it applies to consumer decision-making.

CHAPTER 5

CONSIDERING THE CONSCIOUS AND SUBCONSCIOUS OF THE CONSUMER

5.1 INTRODUCTION

There is very limited research on the sonic logos of brands. One reason could be that the specific element is more than likely not consciously processed by the consumer. Therefore, it is important to gain a better understanding of how the subconscious mind of the consumer functions. In the past, many marketers considered all the decisions of the consumer to be rational. However, there is significant evidence that the majority of consumers' decisions are in fact not rational.

This chapter discusses the different perspectives of consumer decision-making and the role of the consumer's consciousness. The chapter also discusses emotions and how they influence consumer decision-making. In the final section of the chapter, the use of neurophysiological research techniques in marketing research will be discussed.

5.2 CONSUMER DECISION-MAKING

Many theories of consumer behaviour suggest that consumers are rational decision-makers and a consumer will carefully consider his/her options when making a decision about a branded product, make a conscious decision and evaluate the decision (Martin and Morich, 2011). It has been assumed that consumers' decisions derive from the assessment of future outcomes of different alternatives through cost-benefit analyses (Bechara, 2011:93). Consumers also tend to believe that the decision-making process can be explained in this way and when asked about their preferences, intentions to purchase and satisfaction, they are able to provide answers (Martin and Morich, 2011).

There are, however, some concerns associated with this assumption. Firstly, most of the consumers' responses are simply their attempts to rationalise and explain their decisions, when in reality they might not have an explanation (Martin and Morich, 2011). Although consumers prefer to believe that their decisions are supported by logical reasoning, this may not always be the reality (Va, 2015).

In addition, most decision-making models do not address the dynamic and organic processes of human behaviour and suggest that consumer behaviour can be studied as a rigid, linear process (Martin and Morich, 2011).

5.2.1 The Elaboration Likelihood Model

The elaboration likelihood model (ELM) is based on the concept that the process by which consumers make decisions can differ depending on the amount of time the consumer is willing to spend on the decision. The ELM model suggests that changes in attitudes and other judgements result from different psychological processes that depend on the degree of elaboration the individual is engaging in at that moment and the degree of elaboration will be influenced by individual and situational factors (Petty and Briñol, 2015). The ELM model was first introduced by Petty, Cacioppo and Schuman (1983) and distinguishes between two different routes of persuasion. The central route suggests that attitude change is a result of an individual's careful consideration of information that he/she feels is fundamental to the merits of a specific attitudinal position, and the peripheral route suggests that attitude change does not occur because an individual has carefully considered the pros and cons of an issue, but rather because the issue is associated with a positive or a negative cue.

It has been acknowledged that the ELM model has specific implications for advertising messages. Someone who is about to purchase a specific product (high involvement) may be more focused on the product-related information presented in an advertisement, while those who are not considering purchasing the product (low involvement) will not necessarily focus on the product-relevant arguments in an advertisement (Petty et al., 1983). It is generally accepted that consumers will be more motivated to dedicate cognitive effort to evaluating the qualities of a product if involvement with the product is high (Petty et al., 1983). Therefore, when elaboration likelihood is high, the central route of persuasion is considered to be more effective, and when elaboration likelihood is the low, the peripheral route is considered to be better (Petty et al., 1983).

There are, however, a number of concerns related to the ELM model – specifically the role of high involvement – that have been identified and should be taken into consideration. Firstly, learning about a brand from an advertisement is no longer considered particularly important as consumers expect most reputable brands to perform similarly and, therefore, brand decisions are often made instinctively rather than rationally and the majority of advertisements are processed at low attention levels using low involvement processing (Heath, 2001).

Low involvement processing is the mental state in which most advertising is processed and is the reason why many believe that advertising has little or no significant effect on their choice of brands (Heath, 2001). Some question why consumers are not interested enough to pay more attention to the advertisement and if there might be something wrong with the advertisement itself, but the reality is that the average consumer does not consider learning about brands to be important (Heath, 2001).

Low involvement processing, however, does not mean that the consumer does not learn about the brand. Low involvement processing, unlike high involvement processing, happens automatically and even if the consumer's tendency is not to pay attention, brand learning is still being processed (Heath, 2001). Low involvement processing also does not extensively utilise working memory, which means that it is not good at interpreting messages or drawing conclusions from advertisements, but rather collects inputs and stores it exactly as it is (Heath, 2001).

5.2.2 The influence of the subconscious in decision-making

The majority of human behaviour starts as a subconscious process and consumers are not always consciously aware of it or its influence (Martin and Morich, 2011). Consciousness, which is described as the awareness of awareness, is believed to be the exception rather than rule of cognition (Zaltman, 2000).

Often individual buying decisions are simply quick responses to specific marketing stimuli, such as the product packaging, the environment in which the product is presented, the brand image, an advertising strategy or the logo of a brand (Va, 2015). A marketing stimulus that is associated with a specific event has the potential to act as a trigger or a cue. Internal cues are typically moods, thoughts or feelings and external cues are related to stimuli that are perceived by the senses (Martin and Morich, 2011).

Consumer behaviour can be influenced by mental processes that occur outside of conscious awareness (Chartrand, 2005). The use of neurophysiological techniques to better understand consumers' processing of specific marketing stimuli is based on the concept that certain stimuli are processed at a level that he/she is not necessarily consciously aware of.

It is evident from brain scans and other physiological-function measures that activations among brain cells precede the conscious awareness of a specific thought and also precede activity in the areas of the brain concerned with verbal language (Zaltman, 2003:13). In other words, there is often a subconscious response to a stimulus that a consumer will not be aware of and will not be able to describe in words. However, the subconscious response has the ability to influence the perception of the consumer and his/her decision-making. The area in the brain that is associated with choice is activated before the consumer is aware that he/she has made a choice; therefore subconscious judgements occur before conscious judgements (Zaltman, 2003:55).

The conscious and the subconscious processes involved decision-making have often been considered as two separate systems that have independent functions, but operate simultaneously.

5.2.2.1 System 1 and System 2

The research of Kahneman (2011:20) has played an important role in the differentiation between two systems of the mind – System 1 and System 2. These are defined as two distinctive systems that function independently, but simultaneously, to provide their own input when facing a decision (Mishra, Mishra and Nayakankuppom, 2015). System 1 functions automatically and quickly with little to no mental effort and no sense of voluntary control (Kahneman, 2011:71). It is also known as the *cognitive unconscious* or the unconscious mind and is defined as the mental processes that function outside of the consumer's awareness (Zaltman, 2003:48). System 1 has fast and instinctive processes that are formed by means of associative learning on a subconscious level (Mishra et al., 2015). The primary purpose of System 1 is to maintain and update the consumer's model of his/her world and to represent what is normal in it (Kahneman, 2011:71). This model is constructed with specific associations that link ideas of circumstances, events, actions and outcomes that occur simultaneously most of the time (Kahneman, 2011). As these links are created and strengthened over time, the pattern of associated ideas will eventually represent the structure of events in the consumer's life and it will also determine his/her interpretation current events and expectations for the future (Kahneman, 2011:71).

System 2 is known to assign attention to specific effortful mental activities when required and is often associated with activities of choice and concentration (Kahneman, 2011:71). It is also known as conscious thought and is defined as object-relevant or task-relevant cognitive or affective thought processes that will occur when the object or task is the consumer's focus of conscious attention (Dijksterhuis and Nordgren, 2006). System 2 is more controlled, slow, deliberate and constrained by working memory capacity (Mishra et al., 2015). The conscious perception is known to be linear in thought and likely to focus on one task at a time and logical facts (Van Praet, 2012:16).

Both Systems 1 and 2 are active when an individual is awake. System 1 is automatic and System 2 will usually be in a low-effort mode, in which only a small part of its ability will be engaged (Kahneman, 2011:24). Conscious thoughts and subconscious thoughts have different characteristics and the different characteristics are what make these two modes preferable in different situations (Dijksterhuis and Nordgren, 2006). System 1 tends to continuously generate suggestions for System 2, specifically impressions, intuitions, intentions and feelings (Kahneman, 2011:24). When these suggestions are validated by System 2, the impressions and intuitions will be converted into beliefs and impulses into voluntary actions (Kahneman, 2011:71). Similarly, Van Praet (2012:15) suggests that the conscious mind can be seen as a gateway to the subconscious, because repeated conscious activities and experiences eventually lead to habits which reside in the subconscious of the consumer.

Dijksterhuis and Nordgren (2006) argue that the distinguishing factor between conscious and subconscious thought is attention. Conscious thought is thought with attention and subconscious thought is thought without attention or with the focus of the consumer directed elsewhere. Conscious thoughts also play a role when a consumer reviews past actions and plans, and organises how to make choices in new situations (Zaltman, 2003:51). It is important to consider that the subconscious mind does not function like the conscious mind. Subconscious perception allows multiple bits of sensory information to be perceived at the same time with different senses while other information enters consciously (Zurawicki, 2010:34). It is accustomed to multitasking and processing different levels of information simultaneously (Van Praet, 2012:17).

5.2.2.2 The importance of the subconscious mind

Many organisations still believe that consumers only make choices consciously. In other words, they believe consumers deliberately consider the individual and relative value of a specific object's attributes and the probability that the assigned value will be realised; this information is then processed in a logical way to arrive at a final decision (Zaltman, 2003:7). However, a consumer's decision-making and buying behaviour is influenced more by subconscious thoughts and feelings than by the conscious ones, although the conscious ones are also important (Zaltman, 2003:15). Consumer decision-making is based on interplay between cognitive and emotional structures and circuits in the brain (Peacock et al., 2011). An example of this is when a rational message in an advertisement connects with the personal values of the consumer and emotional areas of the brain are stimulated (Peacock et al., 2011). In order for branding to be effective at the deepest and most influential level, it has to combine both conscious and subconscious dimensions to produce a physiological change in consumers that can generate immediate results and be sustained over time (Van Praet, 2012:89).

Due to the influence of brain activities at a subconscious level, there is sometimes a contradiction between what consumers actually feel and what they believe they feel. Although subconscious behaviour cannot be studied by means of conscious introspection, many of the tools used in marketing research, such as surveys and focus groups, rely on the ability of consumers to consciously access specific information and rationalise their opinions and needs (Martin and Morich, 2011). Some researchers have also started to incorporate observation and deep interviewing techniques to access insights below the conscious awareness (Martin and Morich, 2011), but their research does not necessarily investigate the subconscious of the consumer. Techniques used in neuromarketing have the ability to access these subconscious feelings and the knowledge gained from this type of research could be used to improve the marketing strategies of a brand (Va, 2015).

It is also important to consider that when a consumer is exposed to a product, brand information or an advertising campaign, the information is not absorbed passively. Instead, the consumer will create his/her own meaning by blending the information from the organisation with his/her own experience and other stimuli present at that specific moment (Zaltman, 2003:14). Both conscious and subconscious thoughts associated with the brand or sonic logo can play a role in the process of creating meaning. When exposed to the sonic logo of a brand, it is more than likely that it also evokes thoughts and feelings towards the specific brand. These thoughts and feelings could be related to the experience of buying or using the brand. If the consumer has a negative perception toward the brand, being exposed to its sonic logo is likely to trigger negative feelings. However, the reverse is also true. If a consumer has positive feelings towards a brand and likes the specific brand, the sonic logo is more than likely to trigger positive feelings. However, it is also important to consider that listening to a specific sound can be a very subjective and emotional experience. Therefore, if the consumer specifically likes/dislikes the sound of the sonic logo, this predisposition could also play a role in the processing of the sound.

It is important to consider that the subconscious and conscious perceptions of the consumer are often used in combination, paying selective attention to certain parts of a specific situation or stimulus and ignoring other parts (Zurawicki, 2010:34). Most of the time, the process will go smoothly and System 2 will adopt the recommendations of System 1 with little or no modification (Kahneman, 2011: 24). For example, if the sonic logo of a brand is smoothly processed and the link between the sonic logo and the brand is strong, the consumer will not cognitively process the information and the connection between the sonic logo and the brand will be accepted automatically. However, if System 1 experiences difficulty, it will utilise System 2 to support it with more detailed processing that could solve the problem (Kahneman, 2011:24). This could play a role in sonic branding if the sonic logo is not well known by the consumer and there is not a strong connection between the brand and the sonic logo. Also, if the sound of the sonic logo is not well suited to the image of the brand, the consumer might utilise System 2 to attempt to understand the connection between the sonic logo and the brand. When utilising a sonic logo for a brand, it is important to establish it as a strong link in the mind of the consumer. If the association of the sonic logo and other elements of a brand's identity are strong in the mind of the consumer, it is more likely that the brand will be processed with System 1. In other words, the brand will become a part of the consumer's automatic process. He/she will not necessarily rationally consider the decision and rely on the subconscious during the purchase process to make a decision.

There are some subconscious thought processes that the consumer might not be aware of that influence his/her decisions and have the ability to enter the memory of the consumer. Exposure to signals processed below the perception level also leaves traces in the mind and these impact the responses to consciously

processed stimuli (Zurawicki, 2010:35). Specifically, when studying the influence of music, sound or a sonic logo, both conscious and subconscious thoughts and feelings could play a role in forming perceptions. Even if one is not consciously aware of being exposed to a brand element such as the sonic logo of a brand in an advertisement, the element can still influence the perception towards the brand.

For the purpose of this study, the operations of System 1 are important. This is due to the fact that the sounds utilised in advertising and brand elements are often not consciously considered by the consumer. It is more likely to be processed automatically unless one has a specific motivation to cognitively consider the sound and assign attention to it. When questioned about the sounds used in an advertisement, the majority of consumers will more than likely not be able to consciously recall any specific sounds. However, many brands utilise sonic logos and they are successfully associated with the brands and are therefore processed at some level; they could possess the ability to influence the consumer decision-making.

5.3 EMOTIONS

When considering the influences of conscious and subconscious thoughts on decision-making, it is also important to consider the role of emotions. Emotions are closely linked to the rationality or reasoning processes (Zaltman, 2003:8; Van Praet, 2012:88).

5.3.1 Definition of emotions

Multiple definitions of emotions have been proposed. Fredrickson and Branigan (2005) suggest that emotions are fleeting experiences that produce corresponding changes in the thoughts, actions and physiological responses of individuals. The emotions tend to function in the following way: the body will sense information about a situation, produce an appropriate chemical and physical response that generates emotions and thoughts and moves in response to the brain (Zaltman, 2003:28).

Certain emotional reactions are conscious and one is able to recognise their influence. However, many emotions are only fleeting and one might be unaware of their presence. Specifically, emotional reactions have been found to play a key role in how advertisements are received and processed.

5.3.2 The influence of emotions on consumer decision-making

Bechara (2011:73) argues that emotion can play a very important role in influencing humans' everyday cognitive and behavioural functions, such as memory and decision-making. Some suggest that emotion will only interfere with good judgement, but this negative view of the role of emotions does not have a scientific basis. There are others who argue that, in fact, rational decision-making, depends on prior

accurate emotional processing (Bechara, 2011:73). Specifically, the studies of decision-making in neurological patients who no longer have the ability to process emotional information supports the contention that emotions play an important role in rational decision-making (Bechara, 2011:73).

However, it is important to appreciate that emotions are not always beneficial in a decision-making situation as they can also sometimes be disruptive (Bechara, 2011: 74).

An emotional response can become attached and associated with a specific outcome that shapes and guides decision-making (Van Praet, 2012:87). Marketers can utilise the positive emotions of a consumer to benefit a brand. Marketers can also trigger somatic markers by design by associating positive messages repeatedly with specific stimuli, using sensory cues such as sights, sounds and smells (Van Praet, 2012:87). It is important to consider that the minds and memories of consumers work by association and that the repetition and emotion has the ability to strengthen neural associations so that they become automatic (Van Praet, 2012:91).

The emotions of the consumer have the ability to drive his/her preferences, satisfaction, choices and loyalty (Van Praet, 2012:16). The emotional system of the consumer provides valuable implicit or explicit knowledge for making fast and effective decisions (Bechara, 2011:93). Emotions can also play a role in which products consumers select. For example, if there is a strong emotional bond between the consumer and the brand (or the message in the brand's advertising), the emotional influence could play an important role in purchasing decisions (Peacock et al., 2011). Many marketers believe that consumers have the ability to review and describe their own emotions, but the emotions they experience are often subconscious (Zaltman, 2003:10).

An area of marketing where emotions play a very important role is advertising. One of the primary factors believed to contribute to engagement with an advertisement is the emotional activation of the consumer while viewing or listening to the advertisement (Peacock et al., 2011). Advertising that is engaging for the viewer will establish a more significant emotional connection with the brand (Peacock et al., 2011).

5.3.3 The somatic marker hypothesis

The somatic marker hypothesis is an important theory to consider with regard to the role of emotion in consumer decision-making. The primary idea of the hypothesis is that *marker* signals will influence the process of response to stimuli (Damasio, Everitt and Bishop, 1996). Some of the *marker* signals will occur at the conscious level, while others will be subconscious (Damasio et al., 1996). In other words, specific pleasurable or aversive somatic markers will be associated with all internal and external stimuli and can play a role in guiding the consumer's behaviour by biasing certain selections (Mostafa, 2012).

The hypothesis also suggests that the *marker* signals will occur in bio-regulatory processes, which include, but are not limited to emotions and feelings (Damasio et al., 1996). The *markers* are called somatic, because they are related to body-state structure and regulation; even if they do not occur in the body itself, but rather the brain's representation of the body (Damasio et al., 1996). The hypothesis rejects the idea that reasoning and decision-making will be limited to mechanisms that rely on cognition alone (Damasio et al., 1996). Bechara (2011:76) also supports the idea of *somatic states* or *somatic signals* by suggesting that when consumers make decisions, certain mechanisms such as arousal, attention and memory are needed to display the representations of various options and scenarios in the mind's eye of the consumer, but another mechanism is required to weigh the various options and to make the best choice. The mechanism for making good choices is known as decision-making and the physiological changes that will occur in association with selection behaviour forms a part of *somatic states* (Bechara, 2011:76).

The brain is believed to have two separate structures for processing emotions and logical reasoning, but the two systems do communicate with one another and both influence the behaviour of the consumer (Zaltman, 2003:8).

5.3.4 Positive and negative emotions

The mind of the consumer will automatically and subconsciously “tag” all observations with either a positive or negative rating. Consumers do not always know why they like one brand and dislike another, due to the fact that conscious thought is not always involved when the emotional link with certain brand elements is formed and the preferences of the consumer is learned (Van Praet, 2012:81). Consumers may not consciously realise that they are either positively or negatively predisposed to the brand's sonic logo or another element and that it is influencing their judgement of the brand.

The approach system will generally respond to rewards and opportunities, while the avoidance system will be more likely to respond to threats and punishment (Smith and Bargh, 2008). A positive goal would be one toward which behaviour is directed and known as an approach object; a negative goal is one from which behaviour is directed away and is known as an avoidance object.

Both the approach and avoidance systems have unique influences on the actions, motivations and emotions of an individual (Smith and Bargh, 2008). The approach system will guide behaviour related to rewards and opportunities. In other words, rewards and opportunities will activate approach-related processes, such as heightened sensitivity to rewards and actual approach behaviour that will assist in pursuing relevant goals (Smith and Bargh, 2008). The avoidance system is more likely to guide behaviour

in response to threats and punishments. Threats and punishments will activate avoidance-related processes, including heightened vigilance for threats and avoidance (Smith and Bargh, 2008).

When investigating the emotional response toward a specific stimulus at a subconscious level, it is possible to determine whether the consumer is positively or negatively predisposed to the stimulus. The positive and negative reactions are also often referred to as an approach or avoidance reactions when studying the electrical activity on the prefrontal cortex. Negative emotions will prompt inclinations to avoid or reject the affective stimulus and positive emotions will prompt inclinations to approach the stimulus (Teixeira, Wedel and Pieters, 2012b).

A consumer can have both positive and negative feelings towards a brand, based on their associations with the brand's advertising, slogans, logos, mascots, design elements and brand characteristics (Van Praet, 2012:81).

The sonic logo of a brand can play an important role in generating positive feelings towards the brand if the sonic logo fits well with the brand and reminds the consumer of the brand's other positive characteristics. However, if the sound of the sonic logo is irritating and does not suit the brand, it is more likely to generate negative feelings towards the brand.

5.4 DIFFERENCES BETWEEN MALES AND FEMALES' RESPONSES TOWARD ADVERTISING

When studying the influence of sonic logos in advertising, it is important to consider that there may be a difference between male and female consumers' responses toward sonic logos. Differences between males and females have been considered in consumer research in the past and a number of key aspects have been identified. Male consumers are typically more independent and female consumers are more interdependent (Meyers-Levy and Loken, 2015). As a result males are more likely to favour promotions that benefit the self (versus others), favour more efficient online shopping and use detachment to manage negative emotions, while females are more responsive to message appeals that focus on helping others, prefer the social and sensory atmosphere of traditional shopping and use social support to manage negative emotions (Meyers-Levy and Loken, 2015).

In the past there have been some stereotypical assumptions with regards to gender responses toward advertising. Females have often been considered more emotional than males and they are believed to have stronger responses to advertisements with emotional content. However, research on emotional advertising appeals and gender differences have in fact revealed mixed results (Fisher and Dube, 2005). Research has

indicated that female consumers tend to have significantly stronger emotional responses than male consumers to advertisements with emotional appeals (Moore, 2007).

Research has also indicated that male consumers' responses toward advertising with emotional content are significantly influenced by whether they view the advertisement with another male, female or by themselves (Fisher and Dube, 2005). Males had a less favourable attitude towards the advertisement when a low-agency emotion advertisement was viewed with another male, while their responses were not affected by the presence of another person when they viewed a high-agency emotion advertisement (Fisher and Dube, 2005). The responses of males and females also did not differ significantly when an advertisement was viewed alone and the responses of females were alike across the different social contexts and type of advertisement (Fisher and Dube, 2005). There is, therefore, an element of social desirability that should be considered when exploring the advertising responses of male and female consumers (Fisher and Dube, 2005).

Past studies that have explored gender differences have specifically considered responses to advertising for low-involvement products in different information processing conditions (Papyrina, 2015). No gender differences were observed when the opportunity for processing was low (Papyrina, 2015). In contrast, when there was opportunity for detailed information processing, females were more likely to use it and methodically consider the content of an advertisement, while males were more likely to disregard it and instead process an advertisement in a heuristic manner (Papyrina, 2015). Additionally, females were also more likely than males to recommend the product to others when they had the opportunity for detailed information processing (Papyrina, 2015). When judgements are formed by means of the methodical consideration of an advertising message, they are typically more influential and more likely to have an impact on the consumer's behaviour (Papyrina, 2015). These differences were observed when studying consumers' responses toward print advertising and the same results were not observed for television advertising (Papyrina, 2015). The difference observed in terms of the type of media used could be due to fleeting nature of television advertisements and the fact that females were unable to significantly consider the message of the advertisement (Papyrina, 2015).

When studying the differences between male and female consumers, it is important to consider that traditional research methods might not reveal underlying differences that could still influence the behaviour of the consumer, specifically with regards to brand elements that the consumer does not rationally consider and think about.

5.5 THE USE OF NEUROPHYSIOLOGICAL RESEARCH METHODS TO STUDY SUBCONSCIOUS EMOTIONAL RESPONSES

Marketing researchers are starting to use neurophysiological research methods to answer certain marketing questions, because many of the traditional research methods are not able to fully clarify certain issues. Generally, the standard marketing technique used to test advertising stimuli is a verbal interview with the subject after he/she has been exposed to the new advertisement, usually before the launch of the advertising campaign itself (Vecchiato, Toppi, Astolfi, Fallani, Cincotti, Mattia and Babiloni, 2011). There are a number of concerns associated with testing an advertisement in this way. Many subjects would prefer to be compliant to the interviewer and their real thoughts with regard to the advertising may not be fully revealed (Vecchiato et al., 2011).

Some marketers still collect and interpret survey and other consumer information as if the consumer's decision originated largely from a conscious, logical process (Zaltman, 2003:39). Many marketing research techniques ask consumers to consciously consider certain topics and respond within a format that is suitable to both the consumer and marketer (Zaltman, 2003:51). Sometimes, large databases are also used to observe consumer behaviour directly or indirectly and are interpreted on a conscious level (Zaltman, 2003:15).

As an alternative, marketing researchers are also starting to use neurophysiological research methods to gain information about implicit processes that are difficult to access with other methods (Plassman, Venkatraman, Huettel and Yoon, 2015). The reason why many marketers are now interested in using brain imaging tools instead of only asking consumers what their preferences are, is because there is assumption and growing realisation that consumers are not willing or cannot actually explain their preferences when explicitly asked to do so (Vecchiato et al., 2011). The idea, however, is that neurophysiological research methods will not replace traditional methods, but rather provide additional tools and complement other forms of research (Plassman et al., 2015). Neurophysiological research methods are able to quantitatively measure the emotional engagement of a subject during the observation of an advertisement or another marketing stimulus (Vecchiato et al., 2011). These methods are also able to determine whether specific elements of a stimulus will evoke a strong approach or avoidance (positive or negative) reaction in the subject.

One of the main concerns with techniques used in traditional marketing research is that it does not truly study the consumer's below-the-surface-level thinking and behaviour (Zaltman, 2003:15). As mentioned before, the thoughts and actions of a consumer are influenced by both his/her conscious and subconscious thoughts and feelings. Therefore, it can be beneficial to use marketing research techniques that allow one

to gain a better understanding of every element that is likely to influence the consumer at every possible level.

Brain imaging tools such as electroencephalography, also known as EEG, allows one to observe the cerebral activity of a subject and determine which elements of an advertisement elicit an emotional reaction (Vecchiato et al., 2011). Since neurophysiological techniques can be used to see whether consumers would remember or forget an advertisement, whether they are paying attention to it, whether they like or dislike it and whether they evaluate it emotionally or cognitively, these tools could be useful to pre-test an advertisement (Vecchiato et al., 2011). The methods allow one to observe what the influence of specific scenes or elements on advertisement are, and therefore the use of audio logo in an advertisement can also be tested.

The data acquired using neurophysiological research methods demonstrates two dimensions of the responses to a specific stimulus: It records the valence of the consumer's emotional reactions and it observes whether the consumer has a favourable or adverse reaction to a stimulus (Zurawicki, 2010:212). Valence is also described as approach or withdrawal tendencies. It also measures the possibility of arousal. Arousal is a measurement of the intensity of the feelings of the consumer, but does not indicate whether the feelings of the consumer are positive or negative in nature (Zurawicki, 2010:212).

In terms of marketing research, there is significant potential and value in using neurophysiological research methods. The data collected using these methods could assist during the design process of a product, as well as during its commercial campaign (Vecchiato et al., 2011). The results of utilising these methods could be a better product offering that matches the demand of the consumer (Vecchiato et al., 2011). For instance, a study conducted by Ohme et al. (2009) confirmed that the brain can register even small differences between two versions of an advertisement even if, at a conscious level, consumers do not recognise the differences between the two versions. Additionally, neurophysiological research methods can assist in validating, refining and extending existing marketing theories by providing new insights (Plassman et al. 2015).

5.6 SUMMARY

In the past, many marketers considered all the decisions of the consumer to be rational. However, there is significant evidence that the majority of the consumers' decisions are in fact not rational. This chapter focused on the different perspectives of consumer decision-making and the role of the consumer's consciousness. Furthermore, research has also indicated that emotions can have a significant influence on the attitude and behaviour of the consumer.

This chapter also discussed emotions and how they influence consumer decision-making. In the final section of the chapter, the use of neurophysiological research techniques in marketing research was discussed.

The following chapter will focus on the methodology of the study and discuss the problem statement, objectives and hypotheses, the research design, as well as the different neurophysiological research methods that will be used.

CHAPTER 6

RESEARCH METHODOLOGY

6.1 INTRODUCTION

Sonic branding, as well as the influence of the sonic logo on the consumer, has not been considered extensively in academic research in the past and knowledge on the subject is therefore limited. The purpose of this study is to assess the value and the significance of the sonic logo by exploring, by means of neurophysiological research techniques, whether it has an influence on the subconscious emotional condition of the consumer. As there is limited theoretical information on sonic logos available, the study should be considered exploratory in nature and could make a valuable contribution to the domain of sonic branding. It will also provide a foundation for future research on sonic logos and guidelines in terms of how neurophysiological research techniques can contribute valuable insights related to the practice of using sonic logos in advertising.

The previous chapters provide the theoretical foundation upon which the design of this research is based. Although past research on sonic logos is scarce, there are other areas of marketing research that can provide some guidance on how music in marketing and sonic logos ought to be studied. This chapter discusses the methodology that will be used for this study, including the research question, the objectives, the hypotheses, the research design, the different neurophysiological research methods, the sample of the study and the data analysis.

6.2 RESEARCH QUESTION

There are some brand managers who have integrated sonic branding into their marketing strategies and who believe audio associations are useful in creating a distinctive audio identity for a brand (Basile and Quigg, 2011). However, in order for more brands to successfully implement sonic branding and use sonic logos strategically, it is necessary to conduct more research on the subject and to develop a better understanding of how sonic logos are processed at a subconscious emotional level.

The potential of sonic branding is currently under-exploited (Dowdy, 2000). One of the key factors that could be contributing to the current state of affairs is that there is a paucity of research and information on the subject. Although there are some brands that utilise sonic logos, there is no empirical evidence at this stage indicating that this is a worthwhile practice and that there are tangible benefits associated with it. It is, therefore, important to gain a better understanding of the value of sonic logos and how they are processed by the consumer. Sonic logos could present a unique opportunity for brands to distinguish

themselves from others and create strong brand associations. In order for brands to successfully use sonic branding and to create a strong and worthwhile brand association, a better understanding of the subject is thus required.

Although there have been some studies that have investigated the use of certain sound elements, such as music in advertising and the retail environment, there is a growing need for more research on the effect and influence of brands' sonic logos on the subconscious emotional response of the consumer. Lewis et al. (2012) argue that it would be beneficial for marketers and advertisers to gain a better understanding of sound and which sounds would be more appealing to the consumer. Their study investigated the influence of specific sounds in advertising on the emotional response of the viewer. The results indicated that the emotional response to a sound clip is predicted by the level of interest generated by the sound and how well the sound captured the attention of the participant. However, in this study, a survey method was used and consumers were asked to rationally consider and rate their emotional responses to a specific sound on various emotional scales. None of the methods used investigated whether the sound effects had had an influence on the consumer's subconscious emotional response. In other words, they did not consider that the sound effects might influence the consumer at a level that he/she might be unaware of. Furthermore, only sound clips typically used for sound effect purposes in an advertisement, such as bird sounds, were investigated and they were not presented within an advertisement, similar to how the consumer would have been exposed to them.

There are a limited number of studies that have investigated the influence of sonic logos on consumers. Wu et al. (2010) investigated consumers' perceptions of different brands' sound trademarks and which characteristics are important when selecting and designing a sound trademark. The findings indicated that a sound trademark should be designed in such a way that it assists the consumer in remembering the brand and elicits positive awareness, association, attitude and perceptions. The findings also suggested that slogan-alone trademarks, specifically those with vague meanings, may lead to negative attitudes and preferences. Although the study makes a contribution to sonic branding, it used surveys and other traditional research methods to collect data. The sonic logo and other audio elements of a brand are not necessarily noticed and processed by the consumer at a conscious level. The use of only traditional methods in this type of study will not necessarily fully reveal how the sonic logo is processed by the consumer. The influence that a sonic logo can have on a consumer's subconscious emotional condition should also be taken into consideration and neurophysiological research methods can be used to address this limitation. It would also be more representative of how consumers typically interact with the sonic logo of a brand.

As mentioned before, in order to successfully select and develop a sonic logo, a better understanding of how these sounds are processed by the consumer is required. It is also necessary to know whether sonic logos used in television advertisements will evoke a significant subconscious emotional response and whether the sonic logo will influence the consumer's perception of the brand.

This study therefore investigates three main research questions: Does the use of a sonic logo in a television advertisement influence consumers' emotions at a subconscious level? If so, does the sonic logo elicit different subconscious emotional responses from males and females? Lastly, can neurophysiological research methods be used to understand how consumers process

6.3 OBJECTIVES OF THE STUDY

In order to explore the influence of the sonic logo on the subconscious emotional condition of the consumer and thereby address the research question, the following primary and secondary objectives have been formulated.

6.3.1 Primary objective

The primary objective of the study is to determine what influence a sonic logo used in a television advertisement has on the subconscious emotional response of the consumer. The study will also consider how males and females might differ in how they process the sonic logo of a brand at a subconscious emotional level.

6.3.2 Secondary objectives

To address the primary objective of the study, the following secondary objectives will be pursued:

1. To investigate whether a sonic logo used within a television advertisement evokes a significant subconscious emotional response in the participant, compared to the baseline as measured by an EEG, GSR and EMG;
2. To investigate whether a visual logo used within a television advertisement evokes a significant subconscious emotional response in the participant, compared to the baseline as measured by an EEG, GSR and EMG;
3. To investigate whether a sonic logo used within a television advertisement evokes a significant subconscious emotional response in the participant, compared to a television advertisement with no sonic logo as measured by an EEG, GSR and EMG;

4. To investigate whether a sonic logo used within a television advertisement evokes a significant emotional response in the female participants, compared to the baseline as measured by EEG, GSR and EMG;
5. To investigate whether a sonic logo used within a television advertisement evokes a significant emotional response in the male participants, compared to the baseline as measured by EEG, GSR and EMG;
6. To investigate whether a sonic logo used within a television advertisement evokes a significant emotional response in the female participants, compared to the male participants as measured by EEG, GSR and EMG;
7. To investigate whether a visual logo used within a television advertisement evokes a significant emotional response in the female participants, compared to the baseline as measured by EEG, GSR and EMG;
8. To investigate whether a visual logo used within a television advertisement evokes a significant emotional response in the male participants, compared to the baseline as measured by EEG, GSR and EMG;
9. To investigate whether a visual logo used within a television advertisement evokes a significant emotional response in the female participants, compared to the male participants as measured by EEG, GSR and EMG.

6.4 HYPOTHESES

A hypothesis has been formulated for each of the secondary objectives. The hypotheses are presented in the table below.

Table 6.1: Hypotheses

Objective 1	<ul style="list-style-type: none"> - H_0^1: There is no significant difference between the subconscious emotional response of the participant towards the advertisement ending with a sonic logo and the baseline as measured by EEG, GSR and EMG - H_a^1: There is a significant difference between the subconscious emotional response of the participant towards the advertisement ending with a sonic logo and the baseline as measured by EEG, GSR and EMG
Objective 2	<ul style="list-style-type: none"> - H_0^2: There is no significant difference between the subconscious emotional response of the participant towards the advertisement ending with a visual logo

	<p>and the baseline as measured by EEG, GSR and EMG</p> <ul style="list-style-type: none"> - H_a^2: There is a significant difference between the subconscious emotional response of the participant towards the advertisement ending with a visual logo and the baseline as measured by EEG, GSR and EMG
Objective 3	<ul style="list-style-type: none"> - H_0^3: There is no significant difference between the subconscious emotional response of the participant towards the advertisement ending with a sonic logo and the advertisement ending with no sonic logo as measured by EEG, GSR and EMG - H_a^3: There is a significant difference between the subconscious emotional response of the participant towards the advertisement ending with a sonic logo and the advertisement ending with no sonic logo as measured by EEG, GSR and EMG
Objective 4	<ul style="list-style-type: none"> - H_0^4 There is no significant difference between the subconscious emotional response of the female participants towards the advertisement ending with a sonic logo and the baseline as measured by EEG, GSR and EMG - H_a^4 There is a significant difference between the subconscious emotional response of the female participants towards the advertisement ending with a sonic logo and the baseline as measured by EEG, GSR and EMG
Objective 5	<ul style="list-style-type: none"> - H_0^5 There is no significant difference between the subconscious emotional response of the male participants towards the advertisement ending with a sonic logo and the baseline as measured by EEG, GSR and EMG - H_a^5 There is a significant difference between the subconscious emotional response of the male participants towards the advertisement ending with a sonic logo and the baseline as measured by EEG, GSR and EMG
Objective 6	<ul style="list-style-type: none"> - H_0^6 There is no significant difference between the subconscious emotional response of the female participants and the male participants towards the advertisement ending with a sonic logo as measured by EEG, GSR and EMG - H_a^6 There is a significant difference between the subconscious emotional response of the female participants and the male participants towards the advertisement ending with a sonic logo as measured by EEG, GSR and EMG
Objective 7	<ul style="list-style-type: none"> - H_0^7 There is no significant difference between the subconscious emotional response of the female participants towards the advertisement ending with a visual logo and the baseline as measured by EEG, GSR and EMG - H_a^7 There is a significant difference between the subconscious emotional response

	of the female participants towards the advertisement ending with a visual logo and the baseline as measured by EEG, GSR and EMG
Objective 8	<ul style="list-style-type: none"> - H_0^8 There is no significant difference between the subconscious emotional response of the male participants towards the advertisement ending with a visual logo and the baseline as measured by EEG, GSR and EMG - H_a^8 There is a significant difference between the subconscious emotional response of the male participants towards the advertisement ending with a visual logo and the baseline as measured by EEG, GSR and EMG
Objective 9	<ul style="list-style-type: none"> - H_0^9 There is no significant difference between the subconscious emotional response of the female participants and the male participants towards the advertisement ending with the visual logo as measured by EEG, GSR and EMG - H_a^9 There is a significant difference between the subconscious emotional response of the female participants and the male participants towards the advertisement ending with no sonic logo as measured by EEG, GSR and EMG

6.5 RESEARCH DESIGN

The first part of the study explored sonic branding and related concepts by means of secondary research; thereafter, the empirical research was conducted.

6.5.1 Secondary research

A variety of different secondary sources was consulted to explore sonic branding and its function in the domains of marketing and branding. In order to ensure a solid theoretical foundation, books and peer-reviewed academic articles from the databases Ebscohost, Elsevier, ProQuest and Scopus were consulted. To include the industry perspective on sonic branding and sonic logos, relevant magazine articles, websites and webinars were also reviewed.

The literature review focused on different factors that influence the use and value of sonic logos for marketers and how they should be explored. Branding theories, models and their relevance to sonic branding were discussed. The literature review specifically considered the value of sonic logos and how they are currently used by marketers. It also focused on the importance of considering the influence that sonic logos might have on the subconscious emotional condition of the consumer, the idea that male and female consumers might differ in their responses and how neurophysiological research methods can be used to explore this research question.

6.5.2 Empirical research

As discussed, the primary objective of the study is to determine whether a sonic logo used in a television advertisement has the ability to evoke a significant subconscious emotional response in the consumer. The study also considers the differences that may exist between male and female consumers when processing sonic logos.

A laboratory experiment was used for the study. The sonic logos of six brands from two different product categories – electronics and automobiles – were used. Six advertisements were identified; one for each brand. In each of these advertisements, a sonic logo was used in combination with a visual logo during the last few seconds of the advertisement. A manipulated version of each advertisement was created. In the manipulated version, the sonic logo at the end of the advertisement was muted in such a way that the participant would not notice that an element of the advertisement had been removed. There were two versions of each advertisement and a total of 12 advertisements were used.

The study used a between-subject design. Half of the participants viewed the advertisement with the sonic logo and the other half viewed the manipulated version of the advertisement. All the participants viewed a mixture of both manipulated and original advertisements. The order in which the advertisements were presented was randomised. To avoid the bias of demand effects, two additional dummy advertisements, with visual logos but no sonic logos, were also included to ensure that the participants could not detect a pattern and thereby guess the purpose of the study.

6.5.2.1 Measurements

The use of neurophysiological research techniques to study emotions in marketing is a complicated and relatively new approach. A number of different neurophysiological research techniques were used to ensure that the findings of different techniques could be compared. In marketing research, a single physiological measurement is not considered sufficient and it is therefore typically recommended that several measures should be used so that different response patterns can be identified (Ravaja, 2004).

Previous research confirmed that the use of EEG, EMG and GSR facilitates the identification of different neurophysiological patterns of functioning of the brain and facial muscles connected with emotions and arousal during contact with two minimally different versions of the same ad (Ohme et al., 2009). The capabilities of these techniques make them appropriate to study the influence of a sonic logo on the subconscious emotional response of the participants.

Electroencephalography

Electroencephalography (EEG) is a non-invasive and a fairly economical technique that measures a participant's brain activity in response to a specific stimulus (Fortunato et al. 2014). It is often used by cognitive neuroscientists and neurologist to measure electrical activity in the brain (Ohme, et al., 2010).

EEG observes the reaction of the brain waves, where different amplitudes are related to the different mental states, for example wakefulness (beta waves), relaxation (alpha waves), calmness (theta waves) and light and deep sleep (delta waves) (Zurawicki, 2010:48). The electrical activity is measured by positioning several electrodes (up to 256) in various locations on the participant's scalp in a net-like fashion (Zurawicki, 2010:48). The electrodes are incorporated into a headset or cap which, to a degree, limits intrusion to the participant (Fortunato et al. 2014). The electrodes detect electrical potentials, which are produced by neurons in the brain (Kenning and Linzmayer, 2011). Each of the electrodes, also known as "leads", makes its own recording and the electrical potential measured is then compared to the baseline level of the consumer in order to draw a conclusion (Zurawicki, 2010:48).

An advantage of EEG is that it has an exceptionally high temporal resolution which allows researchers to accurately distinguish changes in the brain activity that are linked to quick changing stimuli (Ohme et al., 2010). This feature allows the measure of activity the second a stimulus is presented (Fortunato et al., 2014). It also makes it useful in the research and analysis of television advertisements. However, a disadvantage of this technique is that it has restricted anatomical specificity and that it cannot collect any information from the deeper structure of the brain; only from the surface (Ohme et al., 2010).

The high temporal resolution of EEG allows the researcher to determine whether the different sonic logos used in combination with the visual logo of the brand in an advertisement has a significant effect on the subconscious emotional response of the participant. Past research has indicated that EEG is a suitable tool for studying consumers' responses toward television advertisements, as activity in the left frontal hemisphere was related to the observation of advertisements that had been judged pleasant, and activity in the right hemisphere was related to the observation of advertisements that had been judged less pleasant (Vecchiato et al., 2011).

The data collected with the EEG will conclude whether the viewer has a significant approach or avoidance (positive or negative) response to the sonic logo in the television advertisement.

Facial Electromyography

Facial electromyography (EMG) will also be used in this study. EMG is a technique that studies the physiological properties of certain facial muscles (Ohme et al., 2009). Past research has indicated that

changes in facial expressions are naturally occurring indicators of positive and negative emotions and independent of self-report (Peacock et al., 2011).

EMG works by attaching sensors to different parts of the face and studying the contractions of certain facial muscles in response to specific stimuli (Zurawicki, 2010:50). The EMG measures minuscule fluctuations in the electrical activity. The three muscles that are often studied using EMG are the *corrugator supercili*, the *zygomaticus major* and the *orbicularis oculi* (Ohme et al., 2009). The EMG activity of the *corrugator* (frown muscle) is typically associated with negative emotional stimuli, negative mood and increased tension (Peacock et al., 2011). Past research indicated that activity in the *corrugator supercili* muscle increased when subjects were instructed to imagine negative emotions, and activity in the *zygomaticus major* muscle increased when they instructed to imagine positive emotions (Dimberg and Karlsson, 1997).

Unlike the other involuntary measures used in this study, facial muscle activity is a voluntary physiological indicator generated by the somatic nervous system (Wang and Minor, 2008). However, not all facial responses are voluntary. If an individual is exposed to a positive or a negative stimulus, he/she will often spontaneously and involuntarily produce a facial muscle response pattern that corresponds to the direction of the stimulus, even when instructed to not react at all with facial muscles (Dimberg, Thunberg and Grunedal, 2002). Consumers do not have the ability to fully maintain control over their facial muscles and it is a valuable measurement of automatic emotional responses. Facial measurements offer a deeper and more complex qualitative measure of the viewer's emotional response than self-report measures (Hazlett and Hazlett, 1999).

Past studies have indicated that changes in facial reactions can be observed when a participant is exposed to either a positive or negative stimulus (such as pictures of flowers or snakes) and that facial reactions could be considered a reflection of emotional reactions (Dimberg et al., 2002). Significant elevations in continuous EMG measures have also been related to specific emotion-congruent events in an advertisement and therefore the technique is considered to be a suitable measure when studying emotional responses toward advertising (Hazlett and Hazlett, 1999).

Galvanic Skin Response

Galvanic skin response (GSR) will be used to determine the participants' level of arousal. When an element in an advertisement stimulates the participant's autonomic nervous system, a physical reaction will follow in the sweat glands found in the palms and fingers (Shimp, 2010:299). These glands will open to variable degrees – depending on the strength of the arousal – and skin resistance will drop when the

sweat glands open. This physical reaction is known as the Galvanic Skin Response and is measured with a galvanometer.

A very fine electric current is sent through one finger and out the other and the circuit is completed through the galvanometer. This activity enables the researcher to measure the degree and frequency with which an advertisement or a specific element in a stimulus will activate an emotional response in the participant. The primary limitation of galvanic skin response is that it cannot determine the direction or the valence of an emotional reaction; it only measures the degree of arousal which could be either positive or negative in valence (Ohme et al., 2009). GSR will measure the intensity of a positive or negative reaction towards a specific sonic logo.

6.5.2.2 Stimuli

As discussed briefly in the research design, six different television advertisements that used sonic logos in combination with visual logos at the end of the advertisements were used for the study. South African television advertisements that had been shown on television in the last year were used to ensure the external validity of the study. All of the advertisements selected were between 30 and 45 seconds long and the sonic logos were all included in the last few seconds of the advertisement.

The advertisements selected were taken from two different product categories; namely, automobiles and electronics. These categories were selected for two reasons. First, a number of the brands in these categories have been using sonic logos for a significant period of time in their communications. As the purpose of this study is to assess whether sonic logos, as they are currently being used, have a significant influence on the subconscious emotional response of the consumer, the study considered those sonic logos to which the consumer has probably been exposed in the past. Second, although both automobiles and electronics could be considered high-involvement purchases and typically non-emotional arguments that stress the high-quality attributes of products are used in communications (Schiffman and Kanuk, 2007), research has suggested that consumers are not interested in advertisements and the use of an emotional appeal is best to attract the attention of the consumer, regardless of the product category (Heath, 2001). Therefore, the categories of automobiles and electronics could be considered valid when studying subconscious emotional responses towards advertisements and stimuli used in those advertisements.

In order to ensure that the sonic logos could be compared with one another, the advertisements used for the study were consciously selected to have the same general feeling of neutrality and not to contain any elements of humour in their storylines.

The following brands were included in this study: Citroën, Peugeot, Renault, Intel, LG and Samsung. Two additional dummy advertisements for Honda and Nokia were also included in the study to ensure that participants would not be able to guess the purpose of the study. The sonic logos of the automobile brands used for this study could be regarded as synthetic and the sonic logos of the electronic brands as instrumental (Bonde and Hansen, 2013). A storyboard discussion of each of the advertisements included in the study can be found in Appendix A.

6.5.2.3 Sample

The target population of the study included individuals from the target markets of the brands that would be tested. As the study was conducted in a specific laboratory environment and participants were tested individually and had to be available for up to two hours on the day of the testing, a convenience sample was used.

The participants were 18 years and older in age. Participants were asked to indicate their date of birth on a consent form in order to ensure they were the appropriate age for the study. All of the participants were right-handed, as certain consumer neuroscience and neurophysiological techniques, such as the EEG, EMG and GSR devices, are equipped to test only right-handed individuals.

The participants were asked to take part in the study on a voluntary basis and they were rewarded with a financial incentive. Ninety individuals participated in the study: 50% were male and 50% were female. They were allocated numbers according to their gender to ensure that there was an even split between the gender groups. As it was a between-subject design, half of the participants viewed the advertisement with the sonic logo and the other half viewed the advertisement with no sonic logo. These groups were split equally between the male and female participants.

The participants were given information about the specific requirements, procedures and the amount of time that the study would require prior to committing to partake. Participants were also required to not drink coffee or any other product with caffeine two hours before the test as this could influence the data collected by means of neurophysiological research techniques.

6.5.2.4 Laboratory procedures

The study was conducted in the neuro-laboratory at the University of Stellenbosch. The laboratory has the equipment required for this study, specifically the EEG, EMG and GSR devices. The data collection sessions were typically between an hour and a half and two hours. Participants were required to read and sign a consent form that explained the procedure of the testing in detail, as well as the necessary requirements to participate in the study. An example of the consent form can be found in Appendix B.

During the set-up of the neurophysiological equipment, the procedure was explained to the participants and they were encouraged to ask questions if required. If at any stage a participant did not feel comfortable with the procedure he/she was allowed to discontinue the session.

Since the procedures using neurophysiological research techniques are complicated and there are many different steps, a detailed document on the laboratory procedure used can be found in Appendix C. The correct and the same procedures have to be followed meticulously with each participant to ensure that the data collected can be used for comparison and is an accurate and a true representation of the neurophysiological reactions of the participants toward the stimuli.

Participants were instructed that they would watch a series of advertisements. At the time when the stimuli were shown to the participants, they were asked not to speak, unless a problem with the procedure was experienced. They were told that they merely had to watch the advertisements and were not required to learn or attempt to remember anything from them.

Participants were not told that the purpose of the study was to explore their subconscious emotional responses toward the sonic logos in the advertisements in order to ensure that their reactions would not be influenced by the fact that they know what is being tested.

6.5.2.5 Data analysis

The data was analysed by comparing the subconscious emotional response of the participants towards the scene of the television advertisement with the sonic logo to the scene of the television advertisement with no sonic.

Depending on the location of the electrical activity on the scalp, as measured by the EEG, the data indicated that the responses of the participants towards the sonic logos were either positive (above zero) or negative (below zero). The GSR was used to assess the participants' levels of arousal and indicated a score of zero or above. For the EMG measurement the *corrugator supercili* activity was subtracted from the *zygomaticus major* activity to generate either positive (above zero) or negative reactions (below zero).

An average score was calculated for each of the neurophysiological techniques used to test the influence of the sonic logo or no sonic logo in the advertisement. These scores were compared to a baseline of the participants by means of an independent samples t-test.

The average of the participants' scores with regard to the scenes with the sonic logo and the scene with no sonic logo, as well as the difference between male and female participants' scores regarding these scenes were also compared by means of independent sample t-tests.

6.6 SUMMARY

As discussed, sonic branding and the use of sonic logos have not been considered extensively in academic research in the past. This study is exploratory and aims to examine the value and the significance of the sonic logo and thereby contribute to the general understanding of the subject. As the sonic logo is not necessarily consciously processed by the consumer, neurophysiological research techniques are used to study the influence that a sonic logo incorporated at the end of a television advertisement of a brand will have on the subconscious emotional response of the consumer. The contribution could be considered a foundation for future research on sonic logos.

This chapter discussed the methodology for the study, including the research question, the objectives, the hypotheses, the research design, the different neurophysiological research methods that were used, the stimuli developed for the study, the sample of participants that took part, the laboratory procedure and the analysis of the data.

A number of different objectives were identified for the study and hypotheses were developed accordingly. Television advertisements with sonic logos were used as stimuli to test the influence of the sonic logo on the subconscious emotional conditions of the participants. In the following chapter the statistical results of the study are discussed.

CHAPTER 7

RESULTS AND DISCUSSION

7.1 INTRODUCTION

There is a paucity of academic research that focuses on the use of sonic logos and at this stage there is no empirical information on how consumers process sonic logos and whether they have a meaningful influence on the subconscious emotional response of the consumer that could potentially represent a unique and strong brand association. The purpose of the study is to examine the value and the significance of the sonic logo at a subconscious emotional level and, thereby, contribute to the general understanding of the subject.

Chapter 7 addresses the research question and objectives of the study. This chapter discusses the results of the empirical research. The first part of the chapter focuses on the results of the hypotheses testing that investigated the differences between how participants processed the endings of the advertisements with the sonic logos and the endings of the advertisements with no sonic logos. The differences between participants' subconscious emotional responses for the endings of the advertisements with the sonic logos and the endings of the advertisements with no sonic logos are considered using three different neurophysiological data-collection techniques: EEG, GSR and EMG.

The second part of the chapter focuses on the results of the hypotheses testing that investigated the differences between how male and female participants processed the endings of the advertisements with sonic logos and the endings of advertisements with no sonic logos. Firstly, the comparison between male and female participants' subconscious emotional responses toward the advertisement ending with the sonic logo is discussed. Thereafter, the comparison between male and female participants' subconscious emotional responses toward the advertisement ending with only a visual logo and no sonic logo is discussed. The differences between the subconscious emotional responses of male and female participants are considered with each of the neurophysiological research techniques: EEG, GSR and EMG.

7.2 INFLUENCE OF SONIC LOGOS

The first three hypotheses investigated the influence of the sonic logo and whether there was a significant difference between how the participants processed the endings of the advertisements, with and without the sonic logos, on a subconscious emotional level. Three different neurophysiological measurements were used and the results of each are presented below.

7.2.1 Approach and avoidance reactions

As discussed in Chapter 6, EEG is considered a suitable measure for this study as its high temporal resolution allows one to observe the influence a specific stimulus, such as the sonic logo, has on the subconscious emotional response of the participants and assess whether the participant has an approach or avoidance reaction (positive or negative) towards the sonic logo in the television advertisement (Ohme et al., 2010).

The comparison between the participants' EEG scores for the endings of the advertisements and the baseline is presented in Table 7.1. The comparison of the participants' responses toward the sonic logo ending and visual logo ending as measured by EEG is presented in Table 7.2.

Table 7.1: EEG results – Comparison of advertisement endings and baseline

	EEG	t-value	p-value	Degrees of freedom
No sonic logo: Citroën	-0.52	-2.70	<u>0.01</u>	38
Sonic logo: Citroën	0.19	0.81	0.42	41
No sonic logo: Peugeot	-0.21	-1.12	0.27	41
Sonic logo: Peugeot	-0.03	-0.14	0.89	38
No sonic logo: Renault	-0.02	-0.13	0.90	38
Sonic logo: Renault	-0.07	-0.42	0.68	41
No sonic logo: Intel	0.19	0.92	0.37	41
Sonic logo: Intel	-0.11	-0.53	0.60	38
No sonic logo: LG	-0.21	-0.77	0.45	38
Sonic logo: LG	-0.27	-1.07	0.29	41
No sonic logo: Samsung	-0.08	-0.49	0.63	41
Sonic logo: Samsung	-0.26	-1.26	0.22	38

The EEG results as measured for each of stimuli is presented in the first EEG column of the Table 7.1. The scores shown are the mean scores of the participants that were exposed to the different stimuli. A negative score indicates an avoidance response (negative) and a positive score indicates an approach response (positive). The participants only had positive responses toward two of the stimuli: the Citroën advertisement with the sonic logo and the Intel advertisement with no sonic logo. However, neither of these measures was significant when compared to the baselines of the participants. The Citroën

advertisement with no sonic logo, at an EEG score of -0.52, was the only stimulus that produced a significant avoidance (negative) response ($p \leq 0.05$) when compared to the baseline of the participants. Thus, H_0^1 and H_0^2 are not rejected in terms of EEG.

Table 7.2: EEG results – Difference between sonic and visual logo

	EEG	t-value	p-value	Degrees of freedom
No sonic logo: Citroën	-0.52	-2.31	0.02	79
Sonic logo: Citroën	0.19			
No sonic logo: Peugeot	-0.21	0.67	0.50	79
Sonic logo: Peugeot	-0.03			
No sonic logo: Renault	-0.02	0.19	0.85	79
Sonic logo: Renault	-0.07			
No sonic logo: Intel	0.19	-1.02	0.31	79
Sonic logo: Intel	-0.11			
No sonic logo: LG	-0.21	0.15	0.88	79
Sonic logo: LG	-0.27			
No sonic logo: Samsung	-0.08	-0.67	0.51	79
Sonic logo: Samsung	-0.26			

H_0^3 addressed whether there was a significant difference between the participants' subconscious emotional responses, as measured by EEG, for the final scene of the advertisement in which the sonic logo was either included or not included. The results are presented in Table 7.2.

The mean scores of the participants' responses towards the stimulus with the sonic logo and the stimulus with no sonic logo was compared for each of the brands. When comparing the participants' responses towards the stimuli with a sonic logo versus no sonic logo, the majority of comparisons were not significant. The Citroën advertisement with a sonic logo, EEG score of 0.19, and the Citroën advertisement with no sonic logo, EEG score of -0.52, was the only significantly different comparison ($p \leq 0.05$). Therefore, there is no significant difference between the subconscious emotional response of the participant towards an advertisement ending with a sonic logo and an advertisement ending with no sonic logo, except for Citroën, as measured by EEG and thus, H_0^3 is not rejected in terms of EEG.

7.2.2 Arousal of emotional response

The neurophysiological research method GSR measures the level of arousal that a specific stimulus generates and thereby indicates the intensity of the participant's subconscious emotional response towards the specific stimulus. Although the GSR does not reveal whether the response of the participant is

positive or negative, it is an important measure to include as a subconscious emotional response with a higher intensity will have greater influence on the participant.

The comparison between the participants' GSR scores for the endings of the advertisements and the baseline is presented in Table 7.3. The comparison of the participants' responses toward the sonic logo ending and visual logo ending as measured by GSR is presented in Table 7.4.

Table 7.3: GSR results – Comparison of advertisement endings and baseline

	GSR	t-value	p-value	Degrees of freedom
No sonic logo: Citroën	1.51	1.69	0.10	41
Sonic logo: Citroën	2.29	2.27	0.03	43
No sonic logo: Peugeot	0.63	1.03	0.31	43
Sonic logo: Peugeot	1.54	1.52	0.14	41
No sonic logo: Renault	2.28	2.18	0.03	41
Sonic logo: Renault	0.74	1.26	0.22	43
No sonic logo: Intel	2.39	1.51	0.14	43
Sonic logo: Intel	2.82	1.66	0.11	41
No sonic logo: LG	2.33	1.56	0.13	41
Sonic logo: LG	0.26	1.00	0.32	43
No sonic logo: Samsung	0.92	1.21	0.23	43
Sonic logo: Samsung	3.16	2.29	0.03	41

The GSR results, as measured for each of the stimuli, are presented in the first GSR column of Table 7.3. The GSR scores are the mean scores of the participants that were exposed to the different stimuli. The Citroën advertisement with the sonic logo and the Samsung advertisement with the sonic logo, GSR scores of 2.29 and 3.16, were significant when compared to the baseline of the participants ($p \leq 0.05$). Thus, H_0^1 is not rejected in terms of GSR.

The Renault advertisement with no sonic logo, GSR score of 2.28, was the only significant visual logo stimulus when compared to the baseline of the participants as measured by GSR ($p \leq 0.05$). Thus, H_0^2 is not rejected in terms of GSR.

Table 7.4: GSR results – Difference between sonic and visual logo

	GSR	t-value	p-value	Degrees of freedom
No sonic logo: Citroën	1.51	-0.58	0.57	84
Sonic logo: Citroën	2.29			
No sonic logo: Peugeot	0.63	0.78	0.44	84
Sonic logo: Peugeot	1.54			
No sonic logo: Renault	2.28	1.30	0.20	84
Sonic logo: Renault	0.74			
No sonic logo: Intel	2.39	0.19	0.85	84
Sonic logo: Intel	2.82			
No sonic logo: LG	2.33	1.40	0.17	84
Sonic logo: LG	0.26			
No sonic logo: Samsung	0.92	1.44	0.15	84
Sonic logo: Samsung	3.16			

H_0^3 addressed whether there was a significant difference between participants' subconscious emotional responses, as measured by GSR, for the final scene of the advertisement in which the sonic logo was either included or not included. The mean scores of the participants' responses towards the stimulus with the sonic logo and the stimulus with no sonic logo was compared for each of the brands. When comparing the participants' responses towards the stimuli with a sonic logo versus no sonic logo, none of the comparisons were significant. Therefore, there is no significant difference between the subconscious emotional response of the participant towards an advertisement ending with a sonic logo and an advertisement ending with no sonic logo as measured by GSR and thus, H_0^3 is not rejected in terms of GSR.

7.2.3 Positive and negative responses

Facial muscle movement is a good indicator of whether a subconscious emotional response is positive or negative. EMG observes the miniscule changes in facial muscle movement that reflect automatic emotional responses (Hazlett and Hazlett, 1999).

The comparison between the participants' EMG scores for the endings of the advertisements and the baseline is presented in Table 7.5. The comparison of the participants' responses toward the sonic logo ending and visual logo ending as measured by EMG is presented in Table 7.6.

Table 7.5: EMG results – Comparison of advertisement endings and baseline

	EMG	t-value	p-value	Degrees of freedom
No sonic logo: Citroën	0.59	1.47	0.15	36
Sonic logo: Citroën	-0.09	-0.19	0.85	37
No sonic logo: Peugeot	0.54	1.00	0.32	34
Sonic logo: Peugeot	1.64	3.42	<u>0.00</u>	38
No sonic logo: Renault	-0.58	-1.55	0.13	36
Sonic logo: Renault	-0.18	-0.77	0.44	39
No sonic logo: Intel	0.15	0.86	0.40	36
Sonic logo: Intel	-0.13	-0.45	0.66	38
No sonic logo: LG	-0.13	-0.53	0.60	39
Sonic logo: LG	0.16	0.80	0.43	38
No sonic logo: Samsung	0.06	0.30	0.76	39
Sonic logo: Samsung	0.08	0.30	0.77	35

The EMG results as measured for each of the stimuli are presented in the EMG column of Table 7.5. The EMG scores are the mean scores of the participants who were exposed to the different stimuli. Negative scores indicate a negative response and positive scores indicate a positive response.

The participants had positive responses toward the following stimuli: the Citroën advertisement with no sonic logo, the Peugeot advertisement with no sonic logo, the Peugeot advertisement with the sonic logo, the Intel advertisement with no sonic logo, the LG advertisement the sonic logo, the Samsung advertisement with no sonic logo and the Samsung advertisement with the sonic logo. However, the response of participants toward the Peugeot advertisement with the sonic logo, EMG score of 1.64, was the only significant response compared to the baseline of the participants ($p \leq 0.05$).

The participants had negative responses toward the following stimuli: the Citroën advertisement with the sonic logo, the Renault advertisement with no sonic logo, the Renault advertisement with the sonic logo, the Intel advertisement with the sonic logo and the LG advertisement no sonic logo. None of these measures was significant when compared to the baselines of the participants. Thus, H_0^1 and H_0^2 are not rejected in terms of GSR.

Table 7.6: EMG results – Difference between sonic and visual logo

	EMG	t-value	p-value	Degrees of freedom
No sonic logo: Citroën	0.59	1.10	0.27	73
Sonic logo: Citroën	-0.09			
No sonic logo: Peugeot	0.54	1.54	0.13	72
Sonic logo: Peugeot	1.64			
No sonic logo: Renault	-0.58	-0.91	0.37	75
Sonic logo: Renault	-0.18			
No sonic logo: Intel	0.15	-0.83	0.41	74
Sonic logo: Intel	-0.13			
No sonic logo: LG	-0.13	-0.92	0.36	77
Sonic logo: LG	0.16			
No sonic logo: Samsung	0.06	0.06	0.95	74
Sonic logo: Samsung	0.08			

H_0^3 addressed whether there was a significant difference between participants' subconscious emotional responses, as measured by EMG, for the final scene of the advertisement in which the sonic logo was either included or not included. The results are presented in Table 7.6.

The mean scores of the participants' responses towards the stimulus with the sonic logo and the stimulus with no sonic logo was compared for each of the brands. None of the differences were significant. Therefore, there is no significant difference between the subconscious emotional response of the participant towards an advertisement ending with a sonic logo and an advertisement ending with no sonic logo as measured by EMG and thus, H_0^3 is not rejected in terms of EMG.

7.3 GENDER DIFFERENCES TOWARD SONIC AND VISUAL LOGOS

The second set of hypotheses investigated whether there was a significant difference between how male and female participants processed the endings of the advertisements on a subconscious emotional level. Both the endings of the advertisements with the sonic logos and the endings without the sonic logos were considered. The three different neurophysiological research techniques were used and the results of each are presented below.

7.3.1 Approach and avoidance reactions

To address objectives 4, 5 and 6, EEG was used to assess whether there was a significant difference between the approach and avoidance reactions of the male and female participants for a specific stimulus in the advertisement.

7.3.1.1 Processing of sonic logo

The comparison between the male and female participants' EEG scores for the sonic logo endings and the baseline is presented in Table 7.7. The comparison between the male and female participants' responses toward the sonic logo ending as measured by EEG is presented in Table 7.8.

Table 7.7: EEG results – Gender comparison between sonic logos and baseline

Stimulus	Gender	EEG	t-value	p-value	Degrees of freedom
Citraen	Female	-0.18	-0.46	0.65	18
	Male	0.50	1.74	0.10	22
Peugeot	Female	-0.09	-0.31	0.76	18
	Male	0.03	0.13	0.90	19
Renault	Female	-0.16	-0.70	0.50	18
	Male	0.00	-0.01	0.99	22
Intel	Female	-0.08	-0.24	0.81	18
	Male	-0.13	-0.52	0.61	19
LG	Female	-0.33	-0.90	0.38	18
	Male	-0.21	-0.61	0.55	22
Samsung	Female	-0.41	-1.36	0.19	18
	Male	-0.11	-0.40	0.69	19

The EEG results as measured for each of stimuli is presented in the EEG column of the Table 7.7. The EEG scores are the mean scores for both the male and female participants who were exposed to the different stimuli. Negative scores indicate an avoidance response (negative) and positive scores indicate an approach response (positive).

The female participants had negative responses toward all of the sonic logo stimuli. However, none of these responses were significant when compared to the baseline of the female participants. The male participants had positive responses toward all of the sonic logos associated with automobile brands (Citraen, Peugeot and Renault) and negative responses toward all of the sonic logos associated with electronic brands (Intel, LG and Samsung). None of these responses were significant when compared to the baseline of the male participants. Thus, H_0^4 and H_0^5 are not rejected in terms of EEG.

Table 7.8: EEG results – Difference between male and female processing of sonic logo

Stimulus	Gender	EEG	t-value	p-value	Degrees of freedom
Citroën	Female	-0.18	-1.43	non-significant	40
	Male	0.50			
Peugeot	Female	-0.09	-0.32	non-significant	37
	Male	0.03			
Renault	Female	-0.16	-0.44	non-significant	40
	Male	<u>0.00</u>			
Intel	Female	-0.08	0.13	non-significant	37
	Male	-0.13			
LG	Female	-0.33	-0.24	non-significant	40
	Male	-0.21			
Samsung	Female	-0.41	-0.73	non-significant	37
	Male	-0.11			

H_0^6 addressed whether there was a significant difference between the subconscious emotional response of the female participants and the male participants towards the advertisement ending with a sonic logo as measured by EEG.

The mean scores of the female and male participants' responses towards the stimuli with the sonic logo were compared for each brand. None of the comparisons were significant. Therefore, there is no significant difference between the subconscious emotional responses of the female participants and the male participants towards an advertisement ending with a sonic logo as measured by EEG and thus, H_0^6 is not rejected in terms of EEG.

7.3.1.2 Processing of visual logo

The comparison between the male and female participants' EEG scores for the visual logo endings and the baseline is presented in Table 7.9. The comparison between the male and female participants' responses toward the visual logo ending as measured by EEG is presented in Table 7.10.

Table 7.9: EEG results – Gender comparison between visual logo only and baseline

Stimulus	Gender	EEG	t-value	p-value	Degrees of freedom
Citroën	Female	-0.91	-5.24	<u>0.00</u>	18
	Male	-0.15	-0.46	0.65	19
Peugeot	Female	-0.07	-0.23	0.82	18
	Male	-0.32	-1.46	0.16	22
Renault	Female	-0.41	-1.64	0.12	18
	Male	0.34	1.37	0.19	19
Intel	Female	0.25	0.68	0.51	18
	Male	0.14	0.60	0.55	22
LG	Female	-0.28	-0.70	0.49	18
	Male	-0.14	-0.37	0.71	19
Samsung	Female	-0.06	-0.20	0.84	18
	Male	-0.10	-0.52	0.61	22

The EEG results as measured for each of the stimuli is presented in the EEG column of Table 7.9. The EEG scores are the mean score for both the male and female participants who were exposed to the different stimuli. Negative scores indicate an avoidance response (negative) and positive scores indicate an approach response (positive).

Similar to the processing of the sonic logos, the female participants reacted negatively towards the majority of the visual logo stimuli, with the Intel brand being the only exception. The female participants' response toward the Citroën visual logo, an EEG score of -0.91, was the only significant score when compared to the baseline of the female participants ($p \leq 0.05$). In contrast to the processing of the sonic logos, the male participants only had positive responses toward the visual logos of the Renault and Intel brands, but none of these responses were significant when compared to their baseline. Thus, H_0^7 and H_0^8 are not rejected in terms of EEG.

Table 7.10: EEG results – Difference between male and female processing of visual logo only

Stimulus	Gender	EEG	t-value	p-value	Degrees of freedom
Citroën	Female	-0.91	-2.08	<u>0.04</u>	37
	Male	-0.15			
Peugeot	Female	-0.07	0.65	non-significant	40
	Male	-0.32			
Renault	Female	-0.41	-2.12	<u>0.04</u>	37
	Male	0.34			
Intel	Female	0.25	0.26	non-significant	40
	Male	0.14			
LG	Female	-0.28	-0.25	non-significant	37
	Male	-0.14			
Samsung	Female	-0.06	0.12	non-significant	40
	Male	-0.10			

H_0^9 addressed whether there was a significant difference between the subconscious emotional response of the female participants and the male participants towards the advertisement ending with only a visual logo as measured by EEG.

The mean scores of the female and male participants' responses towards the stimuli with visual logos only were compared for each brand. Only the comparisons between the females and males' responses for the Citroën and Renault visual logos were significant ($p \leq 0.05$). Therefore, there is generally no significant difference between the subconscious emotional response of the female participants and the male participants towards an advertisement ending with no sonic logo as measured by EEG and thus, H_0^9 is not rejected in terms of EEG.

7.3.2 Arousal of emotional response

For the purpose of this objective, GSR was used to assess whether there was a significant difference between the level of arousal of the male and female participants towards a specific stimulus in the advertisement.

7.3.2.1 Processing of sonic logo

The comparison between the male and female participants' GSR scores for the sonic logo endings and the baseline is presented in Table 7.11. The comparison between the male and female participants' responses toward the sonic logo ending as measured by GSR is presented in Table 7.12.

Table 7.11: GSR results – Gender comparison between sonic logos and baseline

Stimulus	Gender	GSR	t-value	p-value	Degrees of freedom
Citroën	Female	1.25	1.40	0.18	20
	Male	3.25	1.86	0.08	22
Peugeot	Female	1.36	1.00	0.33	19
	Male	1.71	1.12	0.27	21
Renault	Female	0.00	N/A	N/A	20
	Male	1.42	1.27	0.22	22
Intel	Female	0.00	N/A	N/A	19
	Male	5.39	1.69	0.11	21
LG	Female	0.00	N/A	N/A	20
	Male	0.50	1.00	0.33	22
Samsung	Female	3.33	1.45	0.16	19
	Male	3.00	1.80	0.09	21

The GSR results as measured for each of the stimuli is presented in the GSR column of the Table 7.11. The GSR scores are the mean scores for both the male and female participants who were exposed to the different stimuli. None of female participants' responses toward the sonic stimuli were significant when compared to their baseline. Similarly, the male participants' responses toward the sonic stimuli were also not significant when compared to their baseline. Thus, H_0^4 and H_0^5 are not rejected in terms of GSR.

Table 7.12: GSR results – Difference between male and female processing of sonic logo

Stimulus	Gender	GSR	t-value	p-value	Degrees of freedom
Citroën	Female	1.25	-0.99	non significant	42
	Male	3.25			
Peugeot	Female	1.36	-0.17	non significant	40
	Male	1.71			
Renault	Female	0.00	-1.21	non significant	42
	Male	1.42			
Intel	Female	0.00	-1.61	non significant	40
	Male	5.39			
LG	Female	0.00	-0.95	non significant	42
	Male	0.50			
Samsung	Female	3.33	0.12	non significant	40
	Male	3.00			

H_0^6 addressed whether there was a significant difference between the subconscious emotional response of the female participants and the male participants towards the advertisement ending with a sonic logo as measured by GSR.

The mean scores of the female and male participants' responses towards the stimuli with the sonic logo were compared for each brand. None of the comparisons were significant. Therefore, there is no significant difference between the subconscious emotional response of the female participants and the male participants towards an advertisement ending with a sonic logo as measured by GSR and thus, H_0^6 is not rejected in terms of GSR.

7.3.2.2 Processing of visual logo

The comparison between the male and female participants' GSR scores for the visual logo endings and the baseline is presented in Table 7.13. The comparison between the male and female participants' responses toward the visual logo ending as measured by GSR is presented in Table 7.14.

Table 7.13: GSR results – Gender comparison between visual logos and baseline

Stimulus	Gender	GSR	t-value	p-value	Degrees of freedom
Citraoën	Female	0.03	1.00	0.33	19
	Male	2.87	1.71	0.10	21
Peugeot	Female	0.04	1.00	0.33	20
	Male	1.16	1.00	0.33	22
Renault	Female	1.48	1.18	0.25	19
	Male	3.01	1.83	0.08	21
Intel	Female	2.63	1.11	0.28	20
	Male	2.17	1.00	0.33	22
LG	Female	2.50	1.00	0.33	19
	Male	2.18	1.23	0.23	21
Samsung	Female	1.72	1.08	0.29	20
	Male	0.19	1.00	0.33	22

The GSR results as measured for each of stimuli is presented in the GSR column of Table 7.13 above. The GSR scores are the mean scores for both the male and female participants who were exposed to the different stimuli.

None of female participants' responses toward the visual logos were significant when compared to their baseline. Similarly the male participants' responses toward the visual logos were also not significant when compared to their baseline. Thus, H_0^7 and H_0^8 are not rejected in terms of GSR.

Table 7.14: GSR results – Difference between male and female processing of visual logo

Stimulus	Gender	GSR	t-value	p-value	Degrees of freedom
Citraen	Female	0.03	-1.62	non significant	40
	Male	2.87			
Peugeot	Female	0.04	-0.92	non significant	42
	Male	1.16			
Renault	Female	1.48	-0.73	non significant	40
	Male	3.01			
Intel	Female	2.63	0.14	non significant	42
	Male	2.17			
LG	Female	2.50	0.10	non significant	40
	Male	2.18			
Samsung	Female	1.72	1.00	non significant	42
	Male	0.19			

H_0^9 addressed whether there was a significant difference between the subconscious emotional response of the female participants and the male participants towards the advertisement ending with only a visual logo as measured by GSR.

The mean scores of the female and male participants' responses towards the stimuli with only the visual logos were compared for each brand. None of the comparisons were significant. Therefore, there is no significant difference between the subconscious emotional response of the female participants and the male participants towards an advertisement ending with only a visual logo as measured by GSR and thus, H_0^9 is not rejected in terms of GSR.

7.3.3 Positive and negative responses

EMG was used to assess whether there was a significant difference between the positive and negative responses of the male and female participants for a specific stimulus in the advertisement.

7.3.3.1 Processing of sonic logo

The comparison between the male and female participants' EMG scores for the sonic logo endings and the baseline is presented in Table 7.15. The comparison between the male and female participants' responses toward the sonic logo ending as measured by EMG is presented in Table 7.16.

Table 7.15: EMG results – Gender comparison between sonic logos and baseline

Stimulus	Gender	EMG	t-value	p-value	Degrees of freedom
Citraën	Female	-0.85	-1.02	0.32	18
	Male	0.67	2.03	0.06	18
Peugeot	Female	1.01	1.65	0.12	17
	Male	2.18	3.07	0.01	20
Renault	Female	-0.34	-0.82	0.42	20
	Male	0.00	-0.02	0.99	18
Intel	Female	0.53	1.65	0.12	17
	Male	-0.68	-1.69	0.11	20
LG	Female	0.62	1.69	0.11	18
	Male	-0.27	-1.85	0.08	19
Samsung	Female	1.02	4.51	0.00	15
	Male	-0.67	-1.75	0.10	19

The EMG results as measured for each of the stimuli is presented in the EMG column of Table 7.15. The EMG scores are the mean scores for both the male and female participants who were exposed to the different stimuli. Negative scores indicate a negative response and positive scores indicate a positive response.

The female participants only had negative responses toward the sonic logos of Citroën and Renault. Only the positive response towards the Samsung sonic logo was significant when compared to the baseline of the female participants. As observed with the EEG measurement, the male participants had positive responses toward all of the sonic logos associated with automobile brands (Citroën, Peugeot and Renault) and negative responses toward all of the sonic logos associated with electronic brands (Intel, LG and Samsung). Their response toward the Peugeot sonic logo, EMG score of 2.18, was the only one that was significant when compared to their baseline ($p \leq 0.05$). Thus, H_0^4 and H_0^5 are not rejected in terms of EMG.

Table 7.16: EMG results – Difference between male and female processing of sonic logo

Stimulus	Gender	EMG	t-value	p-value	Degrees of freedom
Citroën	Female	-0.85	-1.69	0.10	36
	Male	0.67			
Peugeot	Female	1.01	-1.23	non-significant	37
	Male	2.18			
Renault	Female	-0.34	-0.72	non-significant	38
	Male	0.00			
Intel	Female	0.53	2.29	<u>0.03</u>	37
	Male	-0.68			
LG	Female	0.62	2.30	<u>0.03</u>	37
	Male	-0.27			
Samsung	Female	1.02	3.57	<u>0.00</u>	34
	Male	-0.67			

H_0^6 addressed whether there was a significant difference between the subconscious emotional response of the female participants and the male participants towards the advertisement ending with a sonic logo as measured by EMG.

The mean scores of the female and male participants' responses towards the stimuli with the sonic logo were compared for each brand. The differences between the female and male participants' responses were significant for all of the electronic brands (Intel, LG and Samsung) ($p \leq 0.05$). Therefore, there is a significant difference between the subconscious emotional response of the female participants and the male participants towards an advertisement ending with a sonic logo as measured by EMG and thus, H_0^6 is rejected in terms of EMG.

7.3.3.2 Processing of visual logo

The comparison between the male and female participants' EMG scores for the visual logo endings and the baseline is presented in Table 7.17. The comparison between the male and female participants' responses toward the sonic logo ending as measured by EMG is presented in Table 7.18.

Table 7.17: EMG results – Gender comparison between visual logos and baseline

Stimulus	Gender	EMG	t-value	p-value	Degrees of freedom
Citroën	Female	-0.09	-0.17	0.87	17
	Male	1.22	2.13	<u>0.05</u>	18
Peugeot	Female	0.51	0.64	0.53	19
	Male	0.58	0.84	0.41	14
Renault	Female	-0.44	-0.62	0.55	17
	Male	-0.71	-2.39	<u>0.03</u>	18
Intel	Female	0.24	0.94	0.36	18
	Male	0.06	0.24	0.82	17
LG	Female	-0.13	-0.33	0.75	19
	Male	-0.12	-0.44	0.67	19
Samsung	Female	-0.22	-0.67	0.51	18
	Male	0.31	1.45	0.16	20

The EMG results, as measured for each of stimuli, are presented in the EMG column of the Table 7.17. The EMG scores are the mean scores for both the male and female participants who were exposed to the different stimuli. Negative scores indicate a negative response and positive scores indicate a positive response.

The female participants only had positive responses toward the visual logos of Citroën and Renault. None of the measures was significant when compared to the baseline of the female participants. The male participants had positive responses toward the Citroën, Peugeot, Intel and Samsung visual logos and negative responses toward the Renault and LG visual logos. Their positive responses toward the Citroën visual logo, EMG score of 1.22, and negative responses toward the Renault visual logo, EMG score of -0.71, were the only responses that were significant when compared to their baseline ($p \leq 0.05$). Thus, H_0^7 and H_0^8 are not rejected in terms of EMG.

Table 7.18: EMG results – Difference between male and female processing of visual logo

Stimulus	Gender	EMG	t-value	p-value	Degrees of freedom
Citraoën	Female	-0.09	-1.68	non-significant	35
	Male	1.22			
Peugeot	Female	0.51	-0.06	non-significant	33
	Male	0.58			
Renault	Female	-0.44	0.36	non-significant	35
	Male	-0.71			
Intel	Female	0.24	0.50	non-significant	35
	Male	0.06			
LG	Female	-0.13	-0.01	non-significant	38
	Male	-0.12			
Samsung	Female	-0.22	-1.38	non-significant	38
	Male	0.31			

H_0^9 addressed whether there was a significant difference between the subconscious emotional response of the female participants and the male participants towards the advertisement ending with a visual logo as measured by EMG.

The mean scores of the female and male participants' responses towards the stimuli with the visual logo only were compared for each brand. None of the differences were significant. Therefore, there is not a significant difference between the subconscious emotional response of the female participants and the male participants towards an advertisement ending with a visual logo as measured by EMG and therefore, H_0^9 is not rejected in terms of EMG.

7.4 SUMMARY

As research on the subject of sonic branding – specifically sonic logos – is limited, this exploratory study makes a significant contribution and provides a foundation for future research. It appears that this is the first study to explore the influence of sonic logos on the subconscious emotional response of the consumer and to consider that there may be differences between how male and female consumers process auditory stimuli used in marketing.

Chapter 7 focused on the results of the empirical research of the study. The first part of the chapter reported the results related to the objectives on whether participants process the sonic and the visual logos used at the end of an advertisement differently at a subconscious emotional level. The results of the three different neurophysiological research methods were reported separately. The second part of the chapter

reported the results related to the objectives that considered whether male and female participants process the sonic and visual logos differently at a subconscious emotional level. The results of the three different neurophysiological research methods were reported separately.

In the next chapter the findings are discussed in detail. The theoretical and managerial contributions of this study are discussed, as well as the limitations and recommendations for future research.

CHAPTER 8

DISCUSSION AND RECOMMENDATIONS

8.1 INTRODUCTION

Sonic logos are elements of an advertisement that could be considered unique and meaningful brand associations. Ideally, the sonic logo of a brand would trigger a positive subconscious emotional response in the consumer and remind him/her of the brand associated with the sonic logo and his/her experience with the brand. The results of this study suggest that sonic logos may not always function in this way. Marketers ought to be more aware of the influence of the sonic logo and whether it does in fact make a meaningful contribution to the strategy of a brand.

Although the study is exploratory in nature and more research is required on the subject, the study makes a significant contribution and provides a foundation for future research. In this chapter, the findings of the study – as well as their implications – are discussed. First, the differences between how participants processed the sonic logos used with visual logos and only visual logos at the end of advertisements will be considered. Thereafter, the differences between the subconscious emotional responses of male and female participants towards sonic logos used with visual and visual logos only will be discussed. Also discussed are the theoretical and managerial contributions of the study and the limitations that ought to be considered and the recommendations for future research on the subject.

8.2 SONIC LOGOS AND VISUAL LOGOS

The first three objectives of the study considered whether there was a significant difference between how consumers process a sonic logo used in combination with a visual logo and a visual logo with no auditory stimulus at the end of an advertisement.

It is crucial to ensure that the attention of the consumer is maintained until the final moments of a television advertisement, as this scene links the advertising content to the brand. The general belief is that using a sonic logo in this scene would increase the likelihood that the consumer pays attention, as opposed to using visual logo with no auditory support in the final scene. The results of this study indicate that in fact the sonic logo seldom makes a significant difference or contribution in this scene. The results and the implications for each of the neurophysiological measurements are discussed individually.

8.2.1 Approach and avoidance reactions

The EEG measurement observed whether participants experienced an approach or avoidance – also referred to as a positive or negative response – towards the sonic logo used in combination with the visual logo during the final seconds of an advertisement. Research in the past has indicated that both sound and music can act as emotional triggers and can have an influence on the emotional condition or mood of the consumer (Morrison, Gan, Duberlaar and Oppewal, 2011). Often, the consumer might be unaware of the influence that the audio stimulus has on him/her as it is processed at a subconscious level (Oakes et al., 2013). Sonic logos and other sonic branding elements are specifically used strategically by marketers, because they have the ability to trigger an emotional feeling in the consumer and act as unique and meaningful brand association mechanisms (Beckerman and Gray, 2014). Therefore, in order to be considered effective, the sonic logo of a brand used at the end of an advertisement ought to trigger a positive emotional response in the consumer that is significantly different from the consumer's emotional response when only a visual logo is incorporated at the end of an advertisement.

Contrary to expectations, the results addressing the third objective indicated that there was no significant difference between how the advertisement ending with the sonic logo and the advertisement ending without the sonic logo is processed by the consumer at a subconscious emotional level as measured by EEG. The only comparison that was significant was the participants' responses towards the ending of the Citroën advertisement with the sonic logo and the ending with no sonic logo. Although it is interesting to observe that the participants had a positive response towards the ending with the sonic logo and a significantly negative response towards the ending with no sonic logo for the specific brand, it was only observed with the one brand.

The results indicate that the use of the sonic logo at the end of an advertisement does not in fact contribute to how the ending is processed by the consumer at a subconscious emotional level and the sonic logo does not have a long-term emotional effect on the consumer. Therefore, the results indicate that the way in which many marketers have attempted to create a unique and emotionally meaningful audio association for their brands by means of sonic logos have apparently not been successful. There could be a number of different explanations for this state of affairs. First, often marketers do not use the sonic logo of the brand with the same consistency as the visual logo. Sonic logos are not necessarily utilised in every campaign or across a range of different platforms. Therefore, consumers are not necessarily as familiar with the sonic logo of the brand as the visual logo. Repetition has been identified as an important factor in emotional branding, as consumers tend to have positive and more intense feelings toward the elements with which they are familiar (O'Shaughnessy and O'Shaughnessy, 2003:229). Second, the sonic logos that brands are using at this stage are typically short and only a few seconds long. The majority of music psychology

research, focused on the influence of music and sound on the subconscious emotional condition, has studied musical stimuli that were at least thirty seconds in length (Altenmüller, Schürmann, Lim and Parlitz, 2002; Flores-Gutiérrez, Díaz, Barrios, Favila-Humara, Guevara, Del Río-Portilla and Corsi-Cabrera, 2007; Tesoriero and Rickard, 2012; Schmidt and Trainor, 2001).

The emotional impact of an audio stimulus could be dependent on the length of time that the consumer hears it. Therefore, the idea of using a sonic logo as a brand association might be a good strategy, but a lengthier version of the sonic logo could be more effective to ensure that it has the ability to act as an emotional trigger. More research will be required to assess whether a lengthier sonic logo has a more significant impact on the subconscious emotional response of the consumer.

Addressing this specific objective, an interesting observation from the results is that the majority of the EEG scores in the final scene were negative, regardless of whether the sonic logo was included or excluded in the scene. The results differed from previous research that found an increase in attention as measured by EEG towards the end of an advertisement (Micu and Plummer, 2010). The only positive EEG scores were for the final scene of the Citroën advertisement with the sonic logo and the final scene of the Intel advertisement logo with no sonic logo. Although the EEG scores were not significant when compared to the baseline of the participants, they did reveal a trend. The participants' negative emotional responses towards the specific scene could possibly be due to the fact that this is the moment in which the brand is introduced into the television advertisement. Many consumers dislike the nature of television advertising and the way in which it attempts to persuade consumers to buy a specific brand. Another reason for the trend could be that the storyline of the advertisement has ended and the consumer is not interested in the branding information provided. The sonic logo might have a more significant influence on the subconscious emotional condition of the consumer if it is used at the beginning or the middle of the advertisement. More research will be required to assess if the use of the sonic logo in a different part of the advertisement has a significant influence on the subconscious emotional response of the consumer.

8.2.2 Arousal of emotional response

The GSR scores indicated participants' levels of emotional arousal towards the sonic logos used in the final seconds of the advertisements. Although GSR does not indicate whether a response is positive or negative, it is an indicator of the level of intensity of a subconscious emotional response. Only three of the twelve stimuli evoked a significant response when compared to the baseline of the participants. The results varied from previous research that found an increase in arousal towards the end of an advertisement (Micu and Plummer, 2010). The participants had a significant subconscious emotional response to the sonic logo endings of the Citroën and Samsung advertisements. The EEG reading

indicated that the response towards the Citroën sonic logo was positive, but the response towards the Samsung sonic logo was negative. The result of the responses towards the sonic logo of the Citroën brand could perhaps be explained by the design of the visual logo that was used in the advertisement. The visual logo of the Citroën brand was the only visual logo that included an animation where the visual logo lit up and there was a change in colour. The combination of the animated visual logo and the sonic logo could be the cause of the significant positive arousal. The participants also had a significant subconscious emotional response to the no sonic logo ending of the Renault advertisement. The EEG reading revealed that the response towards the Renault visual logo only was negative. The Renault visual logo was also animated and a considerable amount of movement was included in the animation. A lack of audio to support the movement when the sonic logo was muted could have resulted in an intense negative response towards the visual logo. Therefore, it is important to consider that the impact of a sonic logo might be more influential if use in advertisements is considered more strategically and the animation of the visual logo is designed in such a way that it supports the sonic logo and heightens its effect. Future research should consider how sonic logos and visual logos function together and how the animation of visual logos can be used in television advertisements to support consumer learning of the sonic logo.

Comparing the GSR scores for the sonic logo and no sonic logo versions of each advertisement revealed that there were no significant differences in how they were processed by the participants at a subconscious emotional level. Similar to the results of the EEG, the GSR results indicated that the use of a sonic logo at the end of an advertisement does not trigger a subconscious emotional response in the consumer that is significantly different from the way that the consumer processes the ending of the advertisement with only the visual logo. The GSR results could perhaps also be explained by the fact that marketers do not consistently use the sonic logos of brands and, therefore, consumers might not be familiar with the sonic logos. However, the likelihood that participants are familiar with the sonic logo of Samsung is high, as it is used in all of its communication and as a start-up sound for Samsung electronic devices. However, the GSR results of the study revealed that participants had a significant response towards the Samsung sonic logo, but it was negative. Therefore, ensuring that consumers are familiar with the sonic logo of a brand will not necessarily guarantee that it acts as a positive emotional trigger. More research is required to assess if the familiarity of the sonic logo has an influence on the subconscious emotional response of the consumer and whether the influence is in fact positive.

Additionally, a lengthier sonic logo could potentially increase the level of arousal that the sonic logo triggers, but more research is required to confirm this notion.

8.2.3 Positive and negative responses

EMG is a good measurement of the automatic emotional responses that the consumer might not be aware of. For this study EMG was used to explore the influence that a sonic logo has on the facial muscle movement of participants. Past research has indicated that significant elevations in continuous EMG measures are related to emotion-based advertising and specific emotion-congruent events in an advertisement (Hazlett and Hazlett, 1999; Micu and Plummer, 2010). EMG is a particularly good measurement of emotional responses toward auditory stimuli (Dimberg, 1990). The Peugeot sonic logo was the only stimulus that evoked a significant positive emotional response when compared to the baseline of the participants and, therefore, it can be concluded that the moment in which the sonic logo is used in a television advertisement is not necessarily a heightened emotional event.

Similar to the EEG and GSR results, the EMG results also indicated that there were no significant differences between how the sonic logo endings and no sonic logo endings were processed by the consumer. This finding indicates that sonic logos also might not act as a short-term emotional triggers and their value in terms of being an emotionally meaningful brand association could be limited.

8.3 GENDER DIFFERENCES

Research in music psychology has indicated that the subconscious emotional responses of males and females to auditory stimuli are not always the same (Hunter, Schellenberg and Stalinski, 2011; Jaquet, Danuser and Gomez, 2012; Nater et al., 2006). The majority of research on music and sound in marketing has suggested that there is not a significant difference between the responses of male and female consumers to the auditory stimuli. The limited research in marketing that has explored the influence of auditory stimuli on the consumer has not considered the subconscious emotional response of the consumer. This study considers how the subconscious emotional processing of sonic logos might differ between males and females. In order to explore the differences that may exist between the different gender groups more comprehensively, the processing of the visual logos with no sonic logos is also considered.

8.3.1 Approach and avoidance reactions

The neurophysiological research technique EEG was used to assess whether participants had a significant approach or avoidance (positive or negative) response towards a specific stimulus. The EEG results of male and female participants were compared to one another for both the final scenes with sonic logos and final scenes with no sonic logos.

8.3.1.1 Processing of sonic logo

The EEG scores of the male and female participants with regard to the final scenes of the advertisements with the sonic logos indicated distinctive trends. The female participants responded negatively to all of the sonic logos. The male participants responded positively to all of the sonic logos associated with automobile brands and positive responses towards all of the sonic logos associated with electronic brands. Although none of these responses were significant when compared to the baselines of the groups, the difference in the direction of the emotion should be noted. It may be that the product categories could have an influence on the participants' responses. It is likely that the male participants would be more interested than the females in the advertising of the automobile brands and this could influence their emotional responses at the end of the advertisement when the brand is introduced.

When comparing the EEG scores for the two groups, there were no significant differences for any of the sonic logos. The results suggest that there is not a significant difference between how male and female participants process sonic logos at a subconscious emotional level, specifically with regards to a long-term emotional effect. The EEG results suggest that a sonic logo could not necessarily be used to target a specific gender group. Further research would be required to assess whether male and female consumers would also have similar subconscious emotional responses toward lengthier sonic logos or sonic logos that are used in the beginning or the middle of a television advertisement.

8.3.1.2 Processing of visual logo

The EEG scores of the male and female participants toward endings of advertisements with only the visual and no sonic logos were compared with one another. The female participants had negative responses toward all of the advertisements with only visual logos, with the Intel logo being the only exception. Their response towards the Citroën visual logo was the only significant response when compared to their baseline. In contrast to their responses toward the sonic logos of the brands, the male participants responded negatively towards all of the visual logos, except the Renault and Intel visual logos. However, none of these responses were significant when compared to the baseline. The results of the gender differences for both the sonic and visual logos of the brands strongly suggest that the way in which visual and auditory elements are processed are not necessarily the same. However, there may also be some underlying differences between the way males and females process these stimuli and these ought to be noted when studying the differences between the processing of visual and auditory stimuli. Future research in marketing should explore the idea that visual and auditory elements are not processed in the same way on a subconscious emotional level and gender groups should be studied separately.

Similar to the processing of the sonic logos, there were no significant differences between the EEG scores for the two groups for any of the visual logos. The results suggest that there is not a significant difference between how male and female participants process visual logos at a subconscious emotional level, specifically with regards to a long-term emotional effect.

8.3.2 Arousal of emotional response

GSR was used to assess participants' levels of arousal towards specific stimuli; in other words the intensity of the emotional response. The GSR results of male and female participants were compared for both the final scenes with sonic logos and final scenes with no sonic logos.

8.3.2.1 Processing of sonic logo

None of the GSR scores for the male and female participants were significant when compared to the baselines of the groups. This finding suggests that the sonic logos did not have a significant influence on the subconscious emotional responses of either gender group. Therefore, when considering the intensity of the emotional responses triggered by the sonic logos, it cannot be considered an effective strategy to target either of these groups. A significant amount of research will be required to understand whether a sonic logo used in a different format – such as a lengthier version or a different position within an advertisement – has the ability to evoke an intense emotional response in the consumer.

In addition, there were also no significant differences between the male and female participants' GSR scores for each stimulus. This finding is similar to the results of other studies that have explored the influence of emotional stimuli which not find a significant difference between the responses of males and females (Thunberg and Dimberg, 2000). Past research has also indicated that a relaxing auditory stimulus is often associated with reduced arousal (Jancke, Vogt, Musial, Lutz and Kolveren, 1996). However, more research will be required to understand whether participants are in a state of relaxation or simply not influenced by the sonic logo at all.

8.3.2.2 Processing of visual logo

The processing of the visual logo indicated a similar GSR result as the sonic logo. None of the GSR scores for the male and female participants were significant when compared to the baselines of the groups; there were also no significant differences between the male and female participants' GSR scores for each stimulus. Therefore, the use of only the visual logo in the final scene of the advertisement also did not have a significant influence on the subconscious emotional responses of either of the gender

groups and the visual logos were also not processed differently by the gender groups. This finding indicates an issue in terms of how the branding information is processed in an advertisement.

It would be beneficial for marketers if advertisements were designed in such a way that the scene with the brand information triggered a significant positive emotional response as the likelihood that those positive feelings would be transferred to the brand and associated with the brand would be higher. This finding indicates that there is a need for more research on how the brand information in an advertisement is processed by the consumer.

8.3.3 Positive and negative responses

EMG has been used successfully in the past to study the emotional influence of an advertisement (Hazlett and Hazlett, 1999). EMG was used to compare the positive and negative responses of the male and female participants for both the final scenes of the advertisements with sonic logos and the final scenes with no sonic logos.

8.3.3.1 Processing of sonic logo

The results of the EMG analyses for the sonic logos indicated significant differences between the male and female participants. The female participants had negative responses toward the sonic logos of Citroën and Renault and positive responses toward the sonic logos of Peugeot, Intel, LG and Samsung. Only the positive response towards the Samsung sonic logo was significant when compared to the baseline of the female participants. The four sonic logos that generated positive responses among the female participants were all instrumental sonic logos. This finding suggests that the female's emotional response toward the sonic logo could be related to the type of sound that is used for the sonic logo. It could also be related to the product category of the brand as the female participants did not have negative responses toward any of the electronic brands' sonic logos. Future research on sonic logos should consider the influence of the type of sound, as well as the product categories selected.

The male participants had positive emotional responses toward the sonic logos of the automobile brands (Citroën, Peugeot and Renault) and negative emotional responses toward the sonic logos of the electronic brands (Intel, LG and Samsung). Only the positive response towards the Peugeot sonic logo was significant when compared to the baseline of the male participants. This finding also suggests that the product category could influence the male participants' emotional response towards a sonic logo. The type of sound used for the sonic logo could, however, also have an influence since all three of the sonic logos of the electronic brands could be categorized as instrumental sonic logos.

8.3.3.2 Comparing EMG and EEG results

The results suggest that EMG might be more effective at studying the differences between male and female participants' subconscious emotional responses toward sonic logos than EEG. The reason for this could be that facial responses are elicited quickly and detectable after only 300-499 ms of exposure (Dimberg and Thunberg, 1998). It is interesting to compare the findings of the EEG results and EMG results as they are both indicators of emotional response. In other words, they are able to determine whether a participant has a positive or a negative reaction towards a specific stimulus. When comparing the EEG and the EMG results for the male participants' reactions towards the sonic logo scene, it is interesting to note that the results from both analyses correlated. Both the EEG and EMG scores for the Citroën, Renault and Peugeot sonic logos were positive. Also both the EEG and EMG scores for the LG, Intel and Samsung sonic logos were negative. This indicates that utilising EEG and EMG together is effective when studying emotional responses by males towards specific sounds. However, for the female participants' emotional responses towards the various sonic logos, there was not a clear correlation between the EEG and EMG scores. It was, however, interesting to observe that when the female participants had negative EMG responses towards the Citroën and Renault sonic logos, a negative reaction was also observed in the EEG scores. When the female participants' EMG scores were positive towards the sonic logos of LG, Peugeot, Intel and Samsung the EEG scores for these sonic logos were negative and did not correlate with the EMG scores of the sonic logos. This could indicate that using an EEG and EMG device together to study emotional responses of females towards a specific sound stimulus would not necessarily be successful. Further research would be necessary to determine how EEG and EMG function together for auditory stimuli.

8.3.3.3 Males and females processing of sonic logos

The comparisons between the male and female participants' emotional responses reveal a significant difference when measured with EMG. The differences between the emotional responses toward the sonic logos of the electronic brands were all significant. This finding could be related to fact that the specific sonic logos consist of instrumental style sounds or the fact that these three sonic logos were all used by electronic brands. More research is required to understand which factor has a more significant influence on the male and female participants' subconscious emotional responses toward the sonic logo.

Past research in music psychology has reported contrasting results when studying emotional responses toward auditory stimuli with EMG. Some studies indicated that noisy sounds had a significant negative influence on EMG, but responses toward pleasant and unpleasant sounds could not be distinguished with EMG (Jancke et al., 1996). Other studies have, however, confirmed that EMG is in fact a good measure

of the emotional influence of auditory stimuli (Dimberg, 1990). The finding of this study supports the latter.

In conclusion, this study suggests that there is a difference between the subconscious emotional responses of males and females when studying the sonic logo of a brand. The finding of this study also suggests that auditory stimuli used in marketing are not necessarily processed in the same way by male and female consumers. In contrast, past research has suggested that there are no significant differences between how males and females processed emotional stimuli when measured with EMG (Dimberg and Lundquist, 1990). The finding could be unique to the way in which auditory stimuli are processed by males and females.

This is remarkable finding and future research should consider the differences that may exist between how male and female consumers process other sonic branding elements. As discussed in the literature review, sound and music can have a significant effect on the consumer. If it can be used to make a brand strategically more appealing for a specific gender group, it can be used as a strategic tool to target a specific consumer.

8.3.3.4 Processing of visual logo

In contrast to the sonic logo, the results of the EMG for the only visual logos did not indicate a significant difference between the subconscious emotional responses of the male and female participants. The female participants had negative responses toward the visual logos of Citroën, Renault, LG and Samsung. None of the emotional responses were significant when compared to the baseline. The finding differs from the female participants' emotional responses toward the sonic logos of these brands. Therefore, the subconscious response is more than likely influenced by the type of sound used for the sonic logo rather than the product category of the brand.

The male participants had positive emotional responses toward the visual logos of all the brands, except Renault, LG and Samsung. The positive response to the Citroën visual logo and the negative response to the Renault visual logo were the only responses that were significant when compared to the baseline of the male participants. This finding also suggests that the male participants' emotional responses toward the sonic logos are more than likely attributable to the type of sound used for the sonic logo rather than the product category the specific brand is associated with.

8.3.3.5 Comparing EMG and EEG results

Considering the EEG and EMG results together, there was a better correlation for female participants' emotional responses towards the visual logo only than for the sonic logo. Five of the six stimuli studied

indicated the same direction of the emotional response measured by EEG and EMG. The same tendency was not observed in the EEG and EMG scores of male participants for the visual logo. Half of the responses had the same direction with both measurements and the other half had opposite directions. More research will be required to gain a better understanding of how EEG and EMG can be used in combination to study the subconscious emotional responses of consumers toward marketing stimuli.

8.3.3.6 Males and females processing of visual logos

None of the comparisons between the male and female participants for the visual logos with no sonic logos indicated a significant difference between the genders. This finding is supported by other research on visual stimuli that have found similar results (Dimberg and Lundquist, 1990).

This finding could also be an indication that the ways in which males and females process the visual elements of brands are more similar than the way they process audio elements. It is also a confirmation that there are significant differences in the way that females and males process auditory stimuli, such as sonic logos, and this difference should be considered when selecting sonic branding elements for a brand. More research would be required to assess the difference in the way males and females process the visual and audio elements associated with a brand at a subconscious emotional level.

8.4 CONTRIBUTION OF THE STUDY

Although this study is of an exploratory nature, it makes a significant contribution to an area of marketing that has not been considered in academic research before. The theoretical and managerial contribution of the study is discussed.

8.4.1 Theoretical contribution

The study makes a significant theoretical contribution by investigating how sonic logos are processed by the consumer at a subconscious emotional level and whether they have value as emotional triggers. As this subject has not been considered in academic research before, it has an influence and provides a foundation for future research.

Additionally, the study uses neurophysiological research techniques in marketing research, as it is a developing industry and academic research plays an important role in verifying the value that neurophysiological research techniques can contribute. The results of the study will be used as a basis for future research and provide direction in exploring other areas of sonic branding, particularly with regard to the value of using neurophysiological research methods in this area.

The most important finding of the study is that there is a significant difference between the ways that male and female consumers process the sonic logos of brands and that electromyography (EMG) can be used as an effective tool to study and understand these differences. This finding also suggests that there might be significant differences between the ways in which male and female consumers process the other auditory stimuli used in marketing, and neurophysiological research techniques could be used to explore the subject.

The study also indicates that sonic logos as they are currently used do not necessarily have a long-term emotional influence on the consumer. More academic research is required on the subject to assess whether a sonic logo is an advantageous investment for a brand.

8.4.2 Managerial contribution

The study indicates that the way in which sonic logos are currently used by marketers is not necessarily successful at evoking an emotional response in the consumer and establishing a meaningful emotional connection between the consumer and the brand. A number of brands are using sonic logos as part of their brand strategies, but the findings of this study indicate that they may not yield any significant value.

It is evident from the results that the way individuals process the sonic logo of a brand at the end of a television advertisement in combination with the visual logo of the brand does not necessarily differ significantly from the way individuals process only the visual logo of the brand at the end of a television advertisement. This would suggest that in terms of television advertising the sonic logo at the end of the advertisement does not necessarily contribute anything more than using only a visual logo. The value of a sonic logo might be more beneficial in areas where the brand communicates with the consumer in an audio-only format, such as radio advertising and telephone voice-over systems. Future research will have to explore the use of a sonic logo in radio advertising to provide a better understanding of its value for other platforms.

Most importantly, the study suggests that differences between male and female consumers' subconscious emotional responses toward sonic logos can be explored with EMG. It is evident from the results that the EMG device is a good tool for differentiating between the subconscious emotional responses of male and female consumers towards the sonic logo in a television advertisement. Specifically this research indicated that female consumers had more positive emotional reactions towards the sonic logos that were associated with the electronic brands and had instrumental style sounds and the male consumers had more positive reactions towards the sonic logos associated with the car brands that had synthetic style sounds. More research is required, but potentially EMG can be used as a tool to assess whether sonic logos will appeal to target market of a brand.

8.4.3 Managerial implications

It is evident that the way sonic logos are currently used by these specific brands is not necessarily effective at triggering an emotional response or establishing an emotional connection with the consumer. It is important for marketers to explore how sonic logos can be used differently.

Firstly, the role of animation in the visual logo and the influence it has on the consumer's perceptions of the visual logo ought to be explored. Secondly, the time length of a sonic logo should also be carefully considered. Marketing managers ought to explore how sonic logos that are longer in length influence the consumer's perception of the sonic logo and how it can be used in different media to act as a unique brand association.

Finally, marketers should not limit the use of a sonic logo to television advertisements. A variety of platforms should be considered. Specifically, how the sonic logo can be incorporated in the consumer's personal experience of the product.

8.5 LIMITATIONS OF THE STUDY

Although the study makes a significant contribution, there are certain limitations that ought to be considered. Firstly, the external validity of the study ought to be considered as it was conducted in a laboratory environment with neurophysiological research methods and participants were asked to view a series of advertisements on a screen. This condition is not how consumers would typically be exposed to the advertisements in a real world situation. Many consumers do not watch advertisements until the final scene where the brand information is presented or do not watch advertisements at all as they may use PVR to fast-forward.

Secondly, the study only considered the sonic logos used by brands from two product categories-automobiles and electronics. The brands in many other product categories also use sonic logos and, therefore, more research would be required to validate the findings in other product categories.

Thirdly, the study only considered the sonic logos that brands use in advertisements. Many brands incorporate sonic logos into the design of their products, such as Samsung who uses the sonic logo as a start-up sound. Future research should also consider consumers' subconscious emotional responses toward sonic logos on other platforms.

Finally, the study only made use of neurophysiological research techniques. Although these techniques are excellent measures to study the subconscious emotional response of the consumer towards a specific stimulus in an advertisement, traditional methods such as surveys and focus groups can assist in clarifying

why the consumer had a subconscious emotional response towards a specific stimulus. Future research should combine both neurophysiological research methods and traditional methods.

8.6 FUTURE RESEARCH

Sonic branding is a developing area and there is a significant need for more empirical research in this area. This study makes a valuable contribution to the understanding of how sonic logos are processed by the consumer at a subconscious emotional level and acts as a foundation for future research.

Future research should consider the differences that may exist between the way in which male and female consumers process auditory stimuli associated with brands. This study suggests that there are significant variances between how auditory stimuli are processed by the different gender groups and these differences could potentially be used to target a brand towards a specific group. Neurophysiological research techniques ought to be used to study how male and female consumers process advertising music, ambient music and other sonic branding elements. This research ought to include an element of traditional research to question the consumers on why they feel a specific emotional feeling towards an auditory stimulus and thereby gain more knowledge on why these differences exist between males and females and how the information ought to be used marketers to the benefit of the brand.

Future research on sonic logos should also explore the impact of different kinds of sonic logos on the subconscious emotional condition of the consumer. Electronic brands have often used instrumental style sonic logos and automobile brands have used synthetic style sonic logos. There are also other types of sonic logos, such as sampled sonic logos (Bonde and Hansen, 2013). It would be beneficial to explore whether a certain style of sonic logo has a more significant impact on the subconscious emotional condition of the consumer and whether certain style sonic logos are better selections for brands with certain personalities or for brands associated with certain products.

8.7 SUMMARY

This study argues that ideally the sonic logo of a brand would trigger a positive subconscious emotional response in the consumer and act as a unique and meaningful brand association. However, the results of the empirical research suggest that current sonic logos do not always function in this way. The sonic logos do not seem to have an effect on the long-term emotional condition of the consumer and do not trigger a significant feeling of arousal. The sonic logo also does not seem to make a valuable contribution to the final scene of the advertisement as there is no significant difference between how the visual logo of the brand and the visual logo used with the sonic logo is processed. The study does, however, find that there

is a significant difference between how male and female consumers process the sonic logo of a brand and this ought to be explored more in future research and considered with other auditory stimuli as well.

The study provides a foundation for future research on sonic logos and other auditory stimuli associated with brands.

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APPENDIX A

TELEVISION ADVERTISEMENT 1: CITROEN



1

The opening scene shows the Citroën C3 driving from a distant through the loading dock of a harbour. Containers ready to be lifted onto the ships are stacked on top of one another.



2

The next scene show a close-up shot of the Citroën C3.



3

The camera focuses on the couple inside the car.



4

The woman steps out of the car and attaches a clamp to the wheel of the car.



5

The man reverses the car. Cables attached to the four wheels of the car are shown. The tension in the cables increases as the car reverses back.



6

The man drives the car forward at an accelerating speed.



7

The car lifts off the ground high into the sky.



8

The car swings back and forth on the cables in a pendulum motion. The couple inside the car is excited. The camera focuses on the swinging car from a distance.



9

The car slows down onto the road. The woman hits the button to release the attached cables as the car drives past it.



10

The next scene show the Citroën C3 driving off.



11

The text "New Citroën C3- The Visiodrive" appears against a white screen.



12

In the final scene the visual logo of Citroën is shown. The sonic logo is played. In the manipulated version of the ad the sonic logo is muted.

TELEVISION ADVERTISEMENT 2: PEUGEOT



1

The opening scene shows the Peugeot 208 outside a house in the evening. The moonlight shines on the car.



2

The next scene moves to the inside of the house. The camera focuses on the robot that comes alive.



3

The robot is seen walking out towards the Peugeot 208 and getting into the car.



4

The robot turns on the car with the key. As the car is powered up it is as if the robot receives power from it and becomes more alive too. .



5

The car is shown driving through the woods towards the city.



6

In the city the robot drives past a carousel and a group of people in animal masks.



7

The camera focuses on a young woman on a swing looking at the robot driving the car.



8

The robot returns to the house and places the keys of the car on the table.



9

The creator of the robot, an old man resembling Gepetto, suddenly wakes up from the sound of the keys and looks towards the robot.



10

The lights in the robot's eyes switch off and his nose starts to grow similar to that of Pinocchio.



11

The next scene focuses on the car. The following text is displayed on the screen: "Peugeot 208- Awaken your body to new sensations."



12

The final scene shows the Peugeot visual logo with the text "Motion & Emotion". The sonic logo is played. In the manipulated version of the ad the sonic logo was muted in this scene.

TELEVISION ADVERTISEMENT 3: RENAULT



1

The opening scene shows a young boy looking through the window at something outside. The expression on his face is one of excitement.



2

In the next scene, the Renault Clio is shown driving through the street. It is evident that the boy was looking at the car.



3

The scene changes to man pointing a bridge and indicating the place he first saw the Renault Clio.



4

The next scene shows three individuals talking about the first time they saw the Renault Clio.



5

The Renault Clio is shown driving through the city at night.



6

The camera focuses on the logo of the brand on the exterior of the car.



7

The scene changes to the inside of the car and shows the individual driving the car selecting the GPS function build into the car.



8

The scene change to the outside of the car again as it is driving through the city.



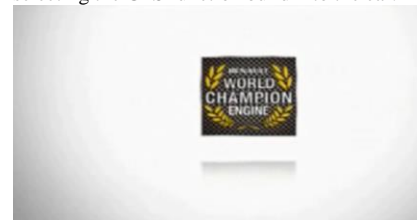
9

A turning Renault Clio is shown against a black background.



10

The price information of the Renault Clio is shown on screen.



11

A "world champion engine" logo appears on screen. The logo turns to reveal the visual logo of Renault. The sonic logo of the brand is played at this stage. In the manipulated version of this ad the sonic logo was muted.



12

The final scene show the Renault logo with the tagline "Drive the change".

TELEVISION ADVERTISEMENT 4: INTEL



1

The opening scene shows a street performer walking down the street with his equipment on a cart.



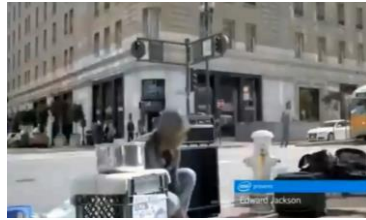
5

The performer starts to play the Intel tablet again. The people on the street stop to listen to him play.



9

The performer is shown playing an energetic tune with a large group of the people standing around him.



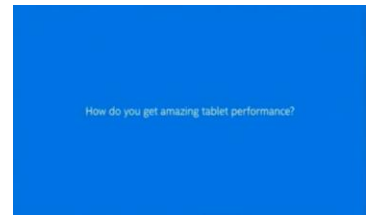
2

The next scene shows the performer setting up his equipment.



6

A crowd of people start to gather around him. There is a drum player playing on buckets with him.



10

The screen changes to blue with the text "How do you get amazing tablet performance". The sonic logo is played from this moment until the end of the ad. In the manipulated version of the ad the sonic logo is muted.



3

He is shown playing music on Intel tablet as if it is a guitar. There are people on the street walking past.



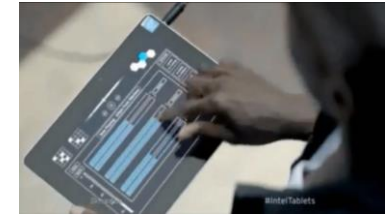
7

The performer plugs the Intel tablet into a speaker. Immediately the volume of the music he plays increases and the crowd around him grows bigger.



11

The text disappears and the outline of a table appears on the screen with the text "Look inside".



4

The camera focuses on the screen of the Intel tablet as the performer makes a few changes to his selection.



8

The performer and the people in the crowd dance along to the music he is playing.



12

In the final scene the Intel visual logo and the text "Look inside" appears on the screen.

TELEVISION ADVERTISEMENT 5: LG



1

The opening scene shows a room full of colourful balls and a lady in a red dress frozen in time. The focus of the camera moves through the room and out of the window.



5

In the room there is a large number of circus performers such as a knife thrower and acrobats. The performers are all frozen in time.



9

The text "4 times more in immersive in cinema 3D" appears against a black screen.



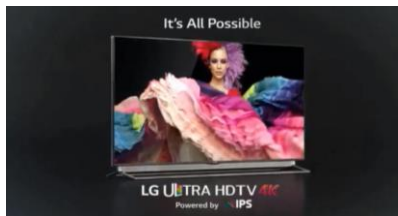
2

The focus of the camera moves towards the next building and zooms in on the window of the building.



6

The camera focuses on the opening of the curtain at the back of room and enters the next room.



10

The lady with the colourful dress is shown on the screen of the LG Ultra HD television in the scene.



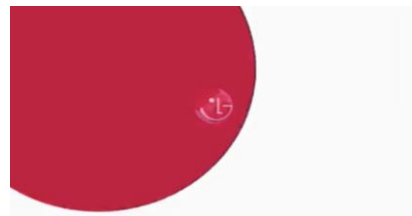
3

Inside the room everyone and everything is frozen in time. The focus of the camera moves across the room and past a woman lying horizontally, parrots and playing cards.



7

A woman with a colourful dress is shown positioned in front of a LG Ultra HD television.



11

The screen turns pink and the colour becomes smaller and forms the pink circle of the LG logo. The sonic logo is played. In the manipulated version of the ad the sonic logo is muted.



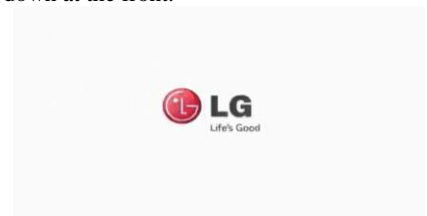
4

The focus of the camera zooms in on the keyhole of the door and crosses through to the next room.



8

The woman throws the skirt of her dress towards the screen. A large number of colourful feathers appears and slowly flows down at the front.



12

The final scene shows the LG logo against a white screen.

TELEVISION ADVERTISEMENT 6: SAMSUNG



1

The opening scene shows the city of San Francisco with the tram in the foreground. The scene changes to a different view of the tram.



2

The next scene shows a young man who is riding on the tram. He watches a group of children playing in the water in the street.



3

The young man focuses on a specific boy in the group with an orange shirt. The icons from the Samsung Galaxy S5's camera function appear on the screen.



4

The view of the scene changes to show the back of the product and the young man taking a photograph. The angle changes to the screen of the product.



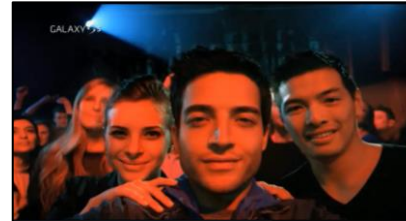
5

A photograph of the boy in orange is shown on the screen. The screen changes to show different functions of the product, an app is selected and race cars are shown driving on the screen.



6

The camera angle changes as the product focuses on the face of the young man and the race cars are seen driving behind the young man in the background.



7

The background of the scene changes quickly multiple times. The position of the young man and the product remain constant. Scenes shown in the background include a city by night, a festival, ballet dancers and posing with some friends.



8

The last background change shows a group of children jumping into a pool. The water from the pool splashes onto the screen of the product.



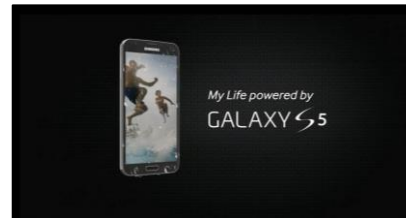
9

The scene returns to the young man's initial location on the tram. It shows the man wiping the water off the screen to emphasize the water resistant feature.



10

The final scene is identical to the opening scene of the ad. The city of San Francisco is shown again with the tram driving in the foreground.



11

The scene changes to a black screen with the text "My life powered by Galaxy S5". Text is also heard on the voice-over. The product is shown rotating to the left of the text.



12

In the final scene the fixed Samsung logo is shown and the sonic logo is heard. In the manipulated version of this advertisement the sonic logo was muted.

APPENDIX B

RULES AND CONDITIONS OF PARTICIPATION IN THE RESEARCH

IMPORTANT NOTE: If the font size used in this document makes you any difficulties in reading, you may ask for the document written in a larger font.

1. The aim of the meeting is the evaluation of TV commercials. Commercials will be presented on the computer screen. Your task is watching the presentation. Prior to the presentation, you will be connected to the device which will measure your psychophysiological reactions. Presentation consists of two parts which are divided by a short break. During this break you will be asked to read a several dozen short words. Thereafter you will come back to presentation.
 - 1.1. The whole meeting will last up to 60 minutes.
 - 1.2. The test does not check either the intelligence nor does it detect any disorders in brain functioning. The obtained data will be analyzed collectively; i.e. we shall get the mean results for all people participating in the project.
2. As mentioned in point 1, during the test your natural psychophysiological reaction will be measured and registered.
 - 2.1. For measuring the psychophysiological reactions the following apparatus will be used:
 - 2.1.1. The Electroencephalograph (also known as EEG) – this device measures and records the natural electrical activity of the brain.
 - 2.1.2. The Electromyograph (also known as EMG) – this device measures and records the natural electrical activity produced by the muscles.
 - 2.1.3. The Galvanic Skin Response Recorder (also known as GSR) – this device measures and records the natural electrical resistance of the skin.
 - 2.2. This is high quality medical equipment (used in medical and scientific institutions) and meets the Patient Safety IEC 60601 standards.
 - 2.3. The set-up of EEG, EMG and the GSR sensors are as follows:
 - 2.3.1. We will place some sensors on your head, face and hands.
 - 2.3.2. The GSR sensors will be placed on your two fingers of the left hand. The preparation procedure requires you to wash your hands using soap before the test.
 - 2.3.3. The EEG sensors will be placed on your head. During the preparatory procedure your scalp will be cleaned with isopropyl alcohol (the same antiseptic liquid that is available in every pharmacy or drug store). Then a cap, like a swim cap with the sensors, will be placed on your head. The sensors have very limited contact with the scalp. For better conductance, the gaps between the scalp and sensors will be filled with water-based gel. The water-based gel is very similar to the gel, which is used during usual electrocardiography examination (ECG). The last stage of the EEG sensors setup is clearing the sensors by brushing out the hair for better conductance.
 - 2.3.4. The EMG sensors will be placed on the left side of your face in three spots: the cheek, under the eye and between the eyebrows. The skin in these spots will be cleaned using disposable wipes moistened with the isopropyl alcohol, a make-up remover lotion and with a gentle abrasive gel. For a better conductance the sensors are filled with water-based gel. To prevent the sensor displacement, they will be fixed with a very gentle sticking plaster.
 - 2.4. During the preparatory procedure and the test some people may feel a light sensation caused by gel and sticking plasters. Some prints of the sensors may be presented on the forehead and face (just like pillow prints after waking up) for several minutes after the test. However, they will disappear after a while.
 - 2.5. Due to the cleansing of the face as well as the use of the water-based gel, after the test the hairstyle and your make-up may require some refreshment. We provide the use of a restroom. (The facility will accommodate: common types of shampoo, hair conditioner, towels, hairdryer and combs.)
 - 2.6. After the test you must (obligatory) remove all of residue from your face. For this purpose we strongly recommend to use water and soap or the make-up remover lotion.
3. The devices used for the test are safe. However, due to methodological requirements there are some exceptions.
 - 3.1. If your answer to at least one of following questions is 'YES' or you are not sure how to answer, you cannot participate in our test. Please report this fact to the receptionist.
 - 3.1.1. Have you consumed strong coffee, very strong tea or any kind of energetic drinks/shots (i.e. Red Bull, Tiger, Monster, etc.), within the last 8 hours?
 - 3.1.2. Have you used any sleeping or sedative drugs within the last 24 hours?
 - 3.1.3. Have you had any hair treatment (i.e. hair dyeing, hair perm, hair extensions, hair implants, etc.) within the last 7 days?
 - 3.1.4. Do you have any hair implants, hair extensions or wire wigs?
 - 3.1.5. Are you under doctor's care for any hair/scalp condition or do you use any skin care product or medicine for your scalp or hair condition treatment?
 - 3.1.6. Have you ever had any head injury, a central nervous system condition (i.e. cerebral tumors, strokes, etc.) or epilepsy symptoms?
 - 3.1.7. In the past have you had any plastic surgery or any kind of face treatment (i.e. Botox, implants, hyaluronic acid, etc.)?
 - 3.1.8. Do you use any electrical body devices such as a pacemaker, defibrillator, etc.?
 - 3.1.9. Are you pregnant or lactating? (This question does not apply to men)
 - 3.2. If you think, that you may not be eligible to participate in this test for any reasons please report this fact to the receptionist. You are not obliged to explain the reasons of your resignation.

4. General rules and conditions of participating in the test.

4.1. For safety reasons please follow the staff's instructions. You may ask the assistant questions concerning your safety at any time during the preparation procedure.

4.2. You must not touch the sensors placed on your head, face, hands, wriggle in the armchair, or rest with your elbows and look around.

4.3. The room where the test is carried out is constantly monitored. The preview is not recorded.

4.4. Voluntary participation and dissolution rules.

4.4.1. The participation in the test is absolutely voluntary.

4.4.2. For your time and participation in the meeting, you will receive R250 in cash. The incentive for participating in the test will be paid after having completed the test.

4.4.3. You may quit the session at any time, however in such cases we are unable to analyze your data and the test is incomplete.

4.4.4. Withdrawal from participation in the course of the test or disturbing the carrying out the test (i.e. you do not comply with the instructions given by the staff) results in an incomplete test and no reward will be paid.

DECLARATION

FIRST AND LAST NAME (PRINT)	
DATE OF BIRTH	MM/DD/YYYY
PHONE NUMBER	()

I, hereunder signed, of my own free will agree to participate in the test as the subject of the test without any exclusions. I have read and understand the complete test procedure prior to engaging in the test. I have been informed that the obtained results will be analyzed collectively, and that my identity will not be revealed.

I declare that all of the provided personal data is true, and consistent with my ID.

I have been informed and I agree without any exclusion that the University of Stellenbosch is not responsible for any consequences resulting from concealing information of the studied person and concerning the contraindications for carrying out the test or/and lack of knowledge of one's own health condition on the day of the test.

SIGNATURE OF THE TESTED PERSON: _____, Date ____/____/2014, Place_____

APPENDIX C

LABORATORY TESTING PROCEDURES

In order to ensure that the same procedures are followed with every participant in the study, it is very important to follow the steps as they have been outlined below.

BEFORE THE PARTICIPANT ARRIVES

- Switch on all the equipment and ensure that all the devices are in working order. Test the sonic branding study to ensure that there are no complications with the specific study and that it will run smoothly when the participant is being tested.
- Switch on the air conditioning if necessary and ensure that the room is at the ideal temperature for testing.
- Check the amount of money available to ensure that there are enough funds to reward all the participants that have been scheduled for the day.
- If it is a hot day, refrigerate the gel that will be used on the electrodes half an hour before the participant arrives. This will ensure that the gel is the right consistency for the testing and not too runny. The best way to do this is to fill the syringes that will be used to put the gel into each of the electrodes with the gel and to place the syringes in the refrigerator.
- Set up the electrodes that will be used to measure the participant's facial muscle movement. The stickers have to be placed on the electrodes and the surgical tape that is used with these electrodes has to be cut in smaller pieces and ready for use. It is important to set up more electrodes than is required. This is due to the fact that it can sometimes be hard to locate the facial muscles and that it is good to have another set of electrodes that can be used immediately close by. Setting up the electrodes for the facial muscles before the participant arrives ensures that the actual testing runs more smoothly and that the time does not run too long which helps to ensure that the participant does not become bored and frustrated with the procedure.
- Check that all of the paperwork that has to be completed by the participant before he/she participates in the study is ready. This typically includes a consent form and in certain studies a pre-test questionnaire.

SETTING UP THE PARTICIPANT FOR TESTING

- Ask the participant if he/she has consumed coffee or any other drink with caffeine in the last two hours. Also confirm again that he/she is in fact right-handed. If the participant has consumed coffee or any other drink with caffeine in the last two hours or they are left-handed, they will not be able to participate in the study at this stage.
- Establish how much information the participant has about the procedure. Explain to the participant that there are no risks involved with the procedure, he/she can ask questions at any time and if he/she is not comfortable they should let the researcher know.
- Shortly explain the different things that the study will be testing and how the devices will be connected to the participant.
- Give the participant the consent form to read through and sign. Be available to answer any questions that might come up.
- Give the participant the pre-test questionnaire to complete. Explain that his/her answers are all confidential.
- Explain to the participant the purpose of the cap and that his/her head has to be measured in order to select the correct size for him/her.
- Measure the size of the participant's head and select the right cap. Set up the electrodes in the EEG cap.
- Explain to the participant that his/her scalp has to be cleaned to ensure that nothing on the scalp such as shampoo, conditioner or hair gel residue interferes with the reading of the EEG device. Women with long hair that is tied back should be asked to remove all hair braids.
- Use a sterilized comb to part the hair and clean the scalp with cotton wool and surgical spirits. Explain to the participant that all equipment has been sterilized and that the surgical spirits is perfectly safe and used on patients in medical environments.
- Explain to the participant that the parts of his/her face where the electrodes will be attached for the facial muscles also have to be cleaned to ensure that nothing on the skin such as makeup or perspiration interferes with the EMG reading.
- Use makeup remover on cotton wool to clean the areas on the face where the electrodes will be attached.
- Explain the two methods with which the cap can be fitted on the head of the participant; either underneath the chin or using a belt that is placed across the chest of the participant. Ask the

participant to indicate which method he/she would prefer. If he/she selects to use the belt across the chest, put the belt on the participant.

- Ask the participant to take a seat in front of the monitor on which the testing stimuli will be displayed.
- Place the cap on the participant's head. Ensure that the cap is in the correct position. The cap should be positioned about two fingers above the eyebrows and the REF and the GND electrodes should be positioned in the centre of the head.
- Explain to the participant the purpose of putting gel into each of the electrodes. Using the syringes to put gel into each of the electrodes in the cap.
- Use cotton wool with makeup remover to clean the areas of the face again where the electrodes will be placed for the facial muscles.
- Put gel on the electrodes that will be used for the facial muscles. Ask the participant to frown and smile in order to identify the correct positions for each of the electrodes. Keep the electrodes in position with surgical tape. Check on the monitor to ensure that each of the facial muscles is being picked up.
- Explain the positioning of the two electrodes on the consumer's fingers to measure Galvanic Skin Response. Clean the fingers, position the electrodes on the fingers and keep them in place with surgical tape.
- Ensure that the participant is sitting in the correct position for the eye tracker to accurately pick up his/her eye movements on the screen.
- Shortly explain to the participant that the test is about to start and more or less what he/she can expect from it. Do not give any specific details as to which television ads are included in the study or what the purpose of the study. Explain to the participant that generally there will be no speaking during the time that he/she is watching the series of ads, but that if there is an issue he/she can speak up about and the test will be paused.
- Ensure once again that the EMG and GSR device are successfully picking up on the participant's facial muscle movements and arousal. Also that all the electrodes in the cap have good conductivity and will provide an accurate EEG reading. The participant is now ready to be tested.